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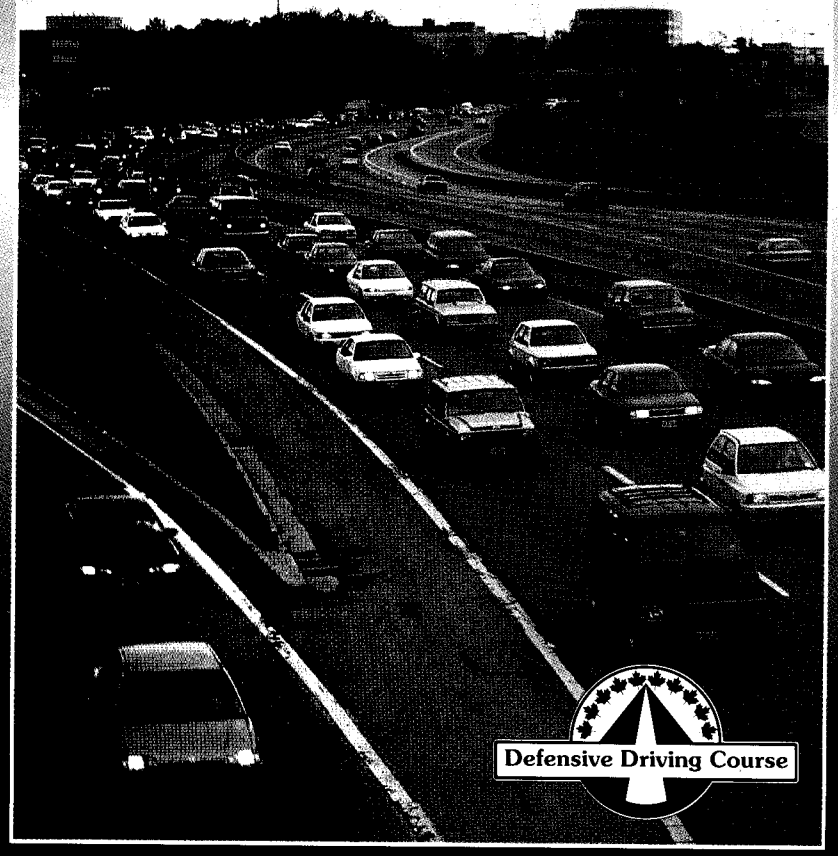
CANADA SAFETY COUNCIL

The Defensive Driver's Manual



Defensive Driving Course

THE DEFENSIVE DRIVER'S MANUAL

INTRODUCTION

The Canada Safety Council's Defensive Driving Course has been designed to help you become a better and safer driver.

Safe driving requires the adoption of an attitude toward operating a motor vehicle known as defensive driving. The defensive driver is not timid or overcautious, but is determined to take every reasonable precaution to prevent traffic mishaps, over and above what is required by law.

In this course you will have the opportunity to learn what is involved in driving defensively, why and how various types of motor vehicle collisions occur, and what it takes to prevent them. You will be provided with a standard of driving excellence that you can use to evaluate and improve your own driving.

The need for better, safer drivers is acute.

- Every day 11 people die in vehicle collisions.
- In one year, about 3,300 people are killed in traffic collisions.

This need is even more dramatic when you consider that 85% of traffic collisions are preventable by the driver(s).

ACCEPTING PERSONAL RESPONSIBILITY IS THE KEY

Defensive driving represents an approach to the driving task which can lessen your chances of being involved in a motor vehicle collision. The critical factor which will determine the success of this approach is your own willingness and readiness at all times to apply the techniques and practices which you will learn on this course.

We encourage you to share what you learn in this course with members of your family, your friends, neighbours and co-workers. This will increase the effectiveness of the course in dealing with traffic collision problems everywhere.

THIS MANUAL BECOMES THE PROPERTY OF THE STUDENT ENROLLED IN THIS COURSE.

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SESSION 1

DEFENSIVE DRIVING PRINCIPLES AND FOUNDATIONS

DEFENSIVE DRIVING IS...
driving to prevent collisions in spite of the actions of others and the conditions around you.

It's a skill you master through study, training, practice and above all else – consistent application. It requires the following elements:

KNOWLEDGE of traffic laws, behind-the-wheel procedures, and how to avoid hazards.

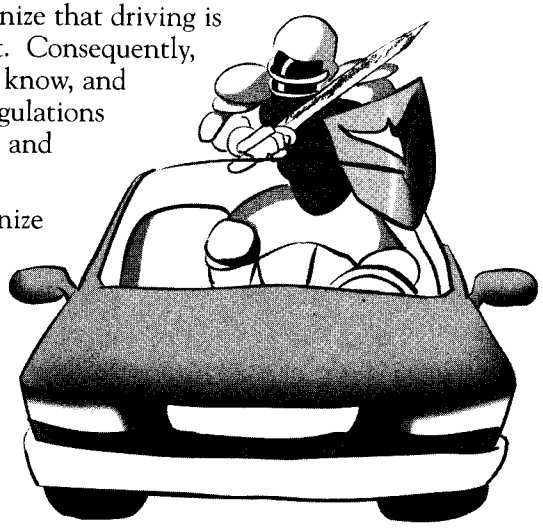
ALERTNESS to conditions around your vehicle that may affect your driving.

FORESIGHT anticipating immediate and long-range developments and preparing for them.

JUDGEMENT knowing what choices you have and making the right decision.

SKILL at handling your vehicle effectively in everyday and emergency conditions.

Defensive drivers recognize that driving is a privilege – not a right. Consequently, they make it a point to know, and respect the rules and regulations which govern our roads and highways.



Defensive drivers recognize that by "giving just a little" – by tailoring their driving behaviour to the six conditions which are always present in the driving situation – they stand to "gain a lot".

A PREVENTABLE COLLISION...
is one in which you failed to do everything reasonable to prevent it.

THE STANDARD ~~ACCIDENT~~ COLLISION PREVENTION FORMULA

Defensive driving is nothing new. It is founded on this well proven three-part standard accident prevention formula:

Recognize the Hazard
Think about what is going to happen or what might happen as far ahead of encountering the situation as possible. Never assume everything will be "all right".

Understand the Defence

There are specific ways of handling specific situations. Learn them and learn them well so you can apply them when the need arises.

Act in Time

Once you've seen the hazard and you understand the defence against it, act! Never take a "wait and see" attitude.

THE SIX CONDITIONS OF DRIVING

The six conditions which influence your driving are: Light, Weather, Road, Traffic, Vehicle and the Driver.

Light
The first requirement of safe driving is to see and be seen.

The problem may be too much light or not enough light. The solution? Adjust your driving to suit the existing conditions.

For bright sunshine or snow-glare, wear sunglasses and use your sun visor.

Avoid looking directly at oncoming bright headlights. Look well ahead to the right for road edge markings as a guide.

For low-light conditions, turn on headlights – not parking lights.

In all situations involving adverse light conditions:

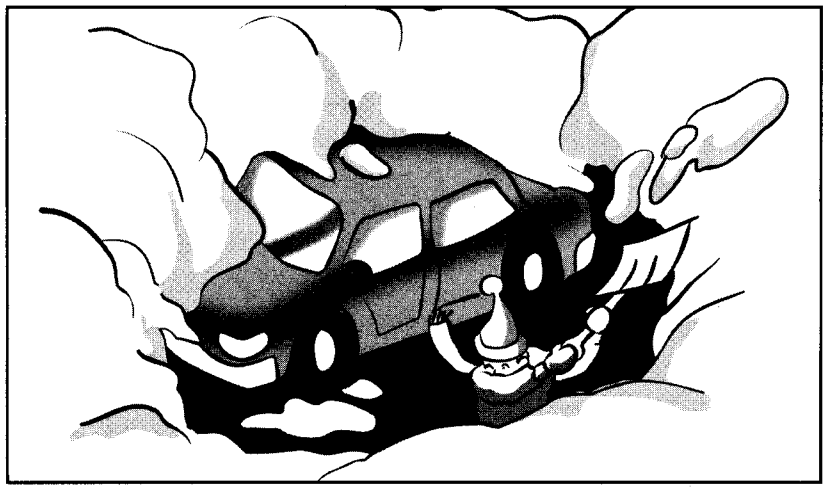
- Reduce speed.
- Increase following distance.
- Keep a sharp eye out for pedestrians and cyclists.
- At night avoid driving at a speed faster than you can safely stop after seeing an object in the beam of the vehicle's headlights.

Keep all vehicle lights clean and in working order, and make sure headlights are properly aimed.

Weather
Sometimes you have to battle the elements for traction, visibility, and vehicle control. Your best weapon? Good Judgement. That may mean a temporary surrender – postponing a trip until conditions improve.

Don't be a "peephole" driver. Clean the windshield and all windows of snow and ice – and don't start out until your defroster has thoroughly cleared all fogged glass.

Make yourself visible to others. Remove buildups of snow, ice and mud from headlights and taillights. Make sure all vehicle lights are in good working order.



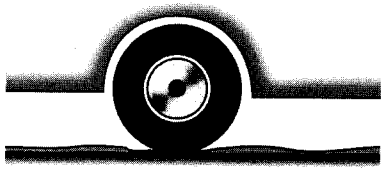
Most importantly, slow down, maintain a safe following distance, and be alert:

- When raining, roads are slipperiest at the start of the rainfall. Surface oil and grease form a slick film that's not washed away until after 20 or 30 minutes of hard rain.
- In light, misty rain the oil and grease will form a slick film that never gets washed away.
- Too much speed, too thin a tire tread or improper tire pressure may lead to hydroplaning. Steering and braking are then affected because the tire isn't in contact with the road – it's actually riding on a thin layer of water.
- When the temperature nears freezing, you may encounter water on a roadway but ice on a bridge. That's because bridge temperatures are two to three degrees Celsius colder than the rest of the road.
- High winds make steering difficult. Control your vehicle, and watch out for other vehicles swerving into your path.
- Use low beams – not high beams or parking lights – when driving in fog. Low beams direct light onto the road ahead. Light from high beams will hit the fog and be reflected off it.

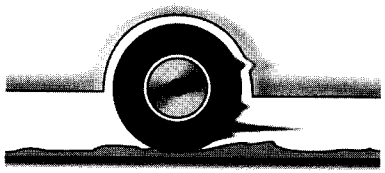
To avoid hydroplaning:

1. Don't drive with bald or badly worn tires.
2. Slow down when there is heavy rain, standing water or slush on the road.

The sketches illustrate how hydroplaning occurs.



At low speeds, tire cuts through water at tire-road juncture, and remains in complete contact with the road.



At speeds above 50 km/h (30 mph), water wedge may penetrate tire-road contact and partial hydroplaning occurs.

At speeds above 90 km/h (55 mph), water wedge may increase and tire losses complete contact with road, causing total hydroplaning.

Road

Long and winding. Wide open. Rough. What other words describe the roadways you drive on?

Conditions change from road to road – from a side street to a main thoroughfare, from a back road to an expressway. And conditions on the same road change – with weather, traffic and construction.

A defensive driver recognizes the changing conditions and makes the necessary allowances for them:

- Be alert to the shape, surface, and shoulder of the road.
- Respond to the signs of potential hazards. Among the skid-producing agents to watch for are wet leaves, gravel, sand, mud, water and ice.
- Test road traction by lightly applying the brakes at slow speed to get the "feel" of the road.
- Reduce speed under slippery conditions.

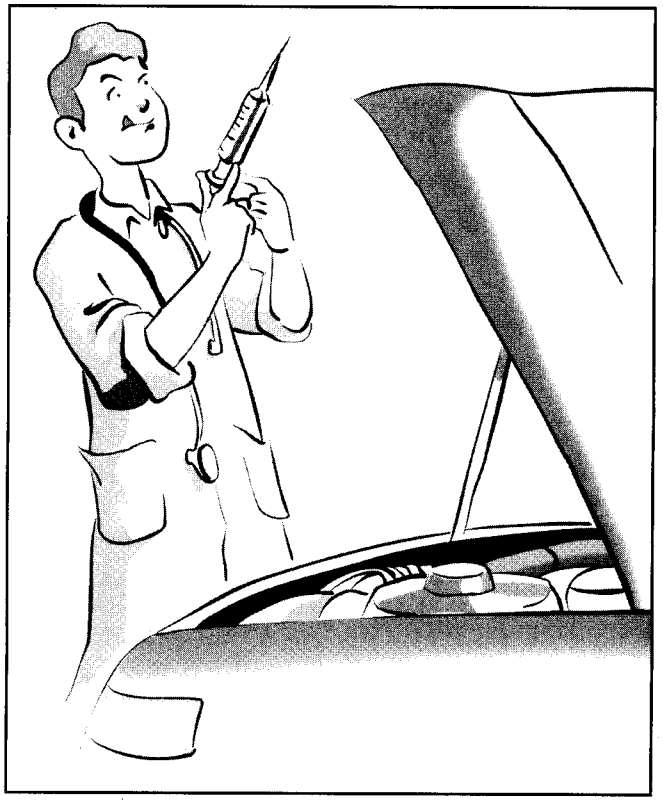
Traffic

When you think of traffic, do you think of bumper-to-bumper tie-ups? Well, don't forget that others – bicyclists, pedestrians, motorcyclists – share the road, too. The greater the amount of traffic on the road, the more chance for conflict and collisions. Here are some tips to smooth the way:

- Always yield the right-of-way to pedestrians.
- Treat motorcycles as full-size vehicles.
- Go with the flow. Travel at the same pace as other traffic, staying within the speed limit. If most other vehicles are speeding, stay to the right.
- Avoid congested routes whenever possible.
- Be considerate. When it's necessary to avoid conflict, yield to others, even if they should rightly yield to you.

Vehicle

To prevent a collision, you need your vehicle to respond reliably and efficiently. Vehicle defects endanger you and others on the road.



Faulty defroster or windshield wipers impair your ability to see potential hazards. If brakes, tires or steering are faulty, the ability to act in emergency situations is impaired. If vehicle lights aren't working, you cannot see or be seen.

Make sure these other vehicle components are working to help you:

- Horn. Should be used to alert other road users of your presence and to establish eye to eye contact. Be seen.
- Mirrors (rearview and side). Know what's behind and beside you. Remember, they do not cover blindspot(s).

- Exhaust System. Prevent leaks of deadly carbon monoxide fumes into your vehicle.
- Occupant Restraints are lifesavers, but only when they're used.
- Before driving an unfamiliar vehicle, take time to get to know where the controls are and how they operate.

Driver

Driver condition is the most important of the six conditions.

Are you physically and emotionally fit to drive? If not, you limit your ability to adjust to the other five conditions and to prevent collisions. The following factors all affect your fitness to drive:

ALCOHOL — Don't mix driving and drinking. Alcohol adversely affects judgement, reaction time, and coordination.

AGE — Know your limitations and adjust to them. Drivers under age 25 tend to be in good physical condition, but lack experience and mature judgement. Drivers over 65 have experience, but may have diminished physical and sensory capabilities. The ability to see well at night decreases with age and is noticeable after about age 40.

ATTITUDE — Aggressive, "me-first" personalities frequently cause collisions by daredevil manoeuvres, "jackrabbit" starts, and screeching halts.

DROWSINESS AND FATIGUE — Don't drive when your tired. Pull off the road for exercise and fresh air. Don't rely on coffee to keep you awake: take a nap or let someone else drive.

DRUGS — Ask your physician about the effects of prescribed drugs and drug combinations on driving ability. Illegal drug use severely affects driving skills, as does the mixture of any drugs with alcohol.

PHYSICAL IMPAIRMENTS

Vision and hearing problems, muscle weakness, uncontrollable epilepsy, heart disease and diabetes are conditions that can increase your driving risk. consult your physician about whether you should drive.

EMOTIONS Heightened emotions – anger, frustration, worry – reduce concentration. Even joy and excitement can take your mind off driving. Get your emotions in check before getting behind the wheel.

THE PRE-TRIP MENTAL INVENTORY

The first step in "recognizing the hazard" is taken before starting the vehicle. This first step is called a pre-trip mental inventory **and** you should begin today to make it a regular part of your driving behaviour.

Here's what to do before starting your vehicle.

Ask Yourself:

- Are there any unusual conditions of light, visibility, weather, road or traffic that I can expect?
- How is the condition of my vehicle? Is it in top running order and fit to drive?
- How do I feel, mentally and physically? Am I fit to drive? Am I rested or tired; calm or emotionally upset? If I am taking medication, how will that affect my driving?

If you've answered these questions favourably, fasten your occupant restraint, turn on the ignition and go. You are mentally prepared for the driving conditions on the trip ahead.

But, if you or your vehicle are not prepared for the trip ahead, make alternate arrangements: take a bus or a taxi; walk or call a friend for a ride; but **DON'T** turn on that ignition. **Remember, you must do everything REASONABLE to prevent collisions.**

SESSION 2

AVOIDING COLLISIONS WITH THE DRIVER AHEAD/ THE DRIVER BEHIND

USING THE EYE-LEAD TIME TECHNIQUE

Once underway your attention and defences shift to the eyes, ears, hands and feet part of driving. The eyes, of course, are the first line of defence and defensive drivers use their vision defensively by employing the concept of Eye-Lead Time.

The technique is straightforward and extremely effective. Here's what to do:

- Keep your eyes moving, to the front, to the sides, and behind. This way you make sure that potential hazards are identified quickly.
- When driving in urban areas, scan the road 12 to 15 seconds ahead. Look to the front and both sides. Twelve seconds eye-lead-time is approximately the distance of a city block.
- When driving on the highway, use twenty to thirty seconds eye-lead time.
- Hazards behind are recognized successfully by checking rearview mirrors every five seconds.
- Never stare at the vehicle ahead.

What you are looking for, and constantly recording and adjusting to, are the six conditions affecting driving, and the six positions of driving. That is, the places of other vehicles in relation to your own:

1. Ahead
2. Behind
3. Oncoming
4. At an intersection

5. Passing

6. Being passed by you.

Your vehicle can collide with a vehicle in any of these positions, thereby becoming involved in the most frequent type of traffic collision – the two-vehicle collision.

HOW TO MAINTAIN SUFFICIENT FOLLOWING DISTANCE

Sufficient following distance goes a long way toward preventing collisions with the vehicle ahead and the vehicle behind. It permits you to react, brake and stop your vehicle smoothly.

Reaction Distance is how far a vehicle travels during the time it takes a driver after spotting a hazard, to respond to it, and activate the brakes. The average reaction time of a person under normal driving conditions is three-fourths of a second.

Braking Distance is how far a vehicle travels from the moment the brakes are activated until it comes to a stop.

Total Stopping Distance is the sum of reaction distance plus braking distance.

Failure to allow sufficient time-interval to react and brake is a frequent and serious driver error. Here is a formula which will allow you to eliminate this error.

THE TIME - INTERVAL FORMULA

Under normal conditions, follow at a distance of at least two seconds. When the driver ahead of you passes a fixed marker, begin counting – "one thousand and one, one thousand and two". If you reach the mark before you've finished counting, you are following too closely. Ease off the accelerator and check yourself again. Under normal conditions, the two-second time-interval will provide you with sufficient distance in which to stop.

Here's what to do under other conditions.

When you are pulling a trailer increase your time interval by 1 second for every extra 3 metres of vehicle length. You will need the extra time and space if you are forced to stop.

Motorcycles are light and can stop quickly. Allow yourself an additional second or two of following distance.

When driving under adverse weather, road, or traffic conditions, add extra seconds to your following distance.

THE VEHICLE AHEAD - HOW TO AVOID A COLLISION -

Stay Alert
Use the technique of eye-lead time to watch for signs of the driver's intentions – turn signals, brake lights, drifting to the right or left in preparation for a turn. Use the time-interval formula to establish the necessary distance between you and the vehicle ahead.

Stay Back
Use the time-interval formula. When conditions are unfavourable, increase the number of seconds of distance between you and the vehicle ahead.

Stay Ahead of the Situation
Use the eye-lead time technique to increase your awareness of potential hazards that face you and the vehicle ahead of you.

Start Stopping Sooner
Slow down and cover the brakes the instant you see a hazard developing that may require you to take evasive action. Delayed braking leads to panic stops which you want to avoid.

THE VEHICLE BEHIND
- HOW TO AVOID A COLLISION -

Signal Your Intentions
Use direction signals and brake lights to communicate. Give the driver behind you time to adjust to your moves. When stopped, keep your brake lights on.

Stop Smoothly
By applying the time-interval following distance with the vehicle ahead, you'll cut the need for sudden stops, and thus reduce the chance of rear-end collisions. When stopped look for the rear tires of the vehicle ahead of you. This will give you enough room to pull forward to avoid being hit from behind.

Slow Down When You Are Being Tailgated
Increase your following distance time-interval. That action encourages tailgaters to pass you or to slow down. Plus, by increasing your distance from the vehicle ahead, you ensure more time to signal your intentions and to avoid abrupt stops that lead to collisions from behind.

HEAD RESTRAINTS REDUCE WHIPLASH

Each year there are thousands of rear-end vehicle crashes. In these, many drivers and passengers claim whiplash injury, one of the most common of collision casualties.

Since head restraints were required as standard equipment in new cars, nearly one-fifth of whiplash injuries have been eliminated. This requires head restraints to be properly adjusted.

HERE'S HOW TO ADJUST YOUR HEAD RESTRAINTS...
the padded section should be adjusted to fit against the back of the skull, and not against the base of the neck. Restraints left in their lowest position may actually increase certain whiplash injuries by serving as a fulcrum over which the head snaps in the event of an accident.

SESSION 3

AVOIDING COLLISIONS WHILE PASSING/WHILE BEING PASSED / WITH AN ON-COMING VEHICLE

BEFORE PASSING ASK YOURSELF:

Is this pass necessary?

Is it safe?

Is it legal?

WHEN IN DOUBT – DON'T.

WHEN YOU'RE PASSING

Stay Back
Use the time-interval formula. You'll be able to see oncoming traffic more easily.

Check Ahead – if you can detect movement in the oncoming vehicles, stay back, don't pass.

Check Behind – check your side and rear-view mirrors.

Check Blindspots – before you change lanes to pass or prepare for a turn, glance over your shoulder in the direction your vehicle will move. Make sure the way is clear.

Signal Left – show your intentions to drivers ahead and behind. Communicate by flashing headlights or tapping the horn if the driver being passed is unaware of your intentions.

Move Left
Change lanes smoothly.

Accelerate – make your pass quickly. don't become a target.

Check Blind spots – look over your right shoulder in the direction the vehicle will move to make sure the lane is clear.

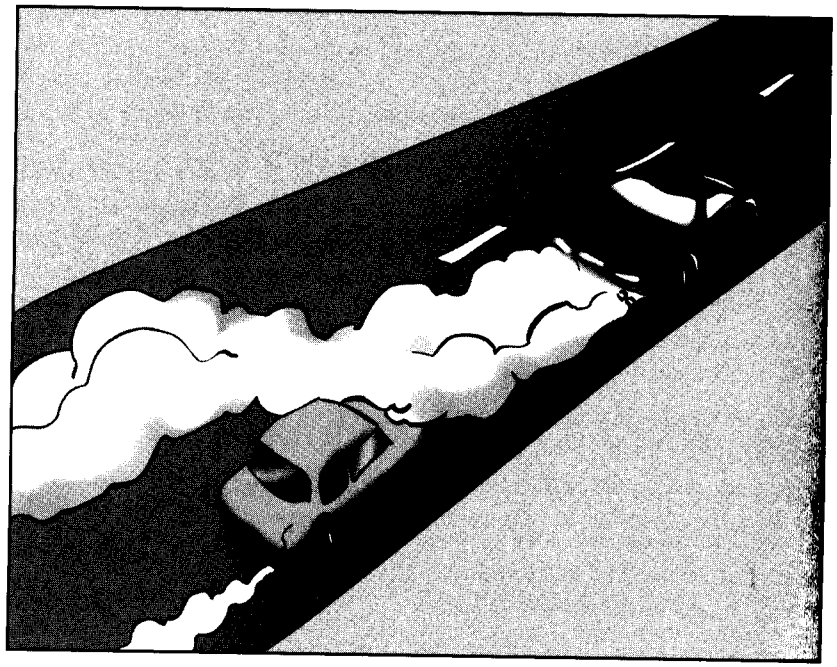
Signal Right – show your intentions. Look for the front of the vehicle you have just passed in your rear-view mirror.

Move Right

Return to your lane smoothly.

Cancel Signal – it won't cancel automatically. Leaving it on may confuse other drivers.

Maintain Proper Speed – resume safe speed. Don't slow down in front of the driver you've passed.



WHEN YOU ARE BEING PASSED

Vehicles can pass you:

- on a straight road
- as you are pulling out of a parking space
- just as you move out to pass another vehicle
- on the right (legal on multi-lane or one-way streets)

There are a number of things you can do to prevent a collision when other cars pass you:

- Help the other driver pass. Check oncoming traffic. Slow down if the passing vehicle will need more room to get back in the line in front of you.
- Adjust to a proper time-interval formula when the passing vehicle pulls in line ahead of you.
- Before you change lanes, look to see if you are about to be passed. Check side and rearview mirrors and glance back to make sure your blind spot is clear. Use your directional signals. Move over only when the lane is clear.
- Get into the proper lane for a turn well before the turn. When turning right, stay close to the right curb to block anyone from passing on the right. Use your turn signal early.
- Don't nose out of a parking space to check for traffic. Take a good look before you move. Signal your intentions, wait for a break in the traffic, and pull out promptly.

THE ONCOMING VEHICLE

The deadliest of all collisions is one that occurs with an oncoming vehicle. A number of factors contribute to the fatalities that result from such collisions:

- In a head-on collision, the cars involved stop almost immediately, unfortunately their occupants usually keep on travelling – right into the windshield and instrument panel.

- Since most head-on collisions occur slightly off-centre, one or both cars spin and their occupants are thrown out of the car. This is where safety belts save lives.

WHY HEAD-ON COLLISIONS OCCUR

On undivided roadways, be constantly alert for situations that might cause oncoming vehicles to swerve into your lane, such as:

The driver is attempting to pass another vehicle.

- The driver is forced into your lane by another vehicle.
- The lane markings are worn or covered by puddles, snow or mud.
- The driver is swerving to avoid a pedestrian or bicyclist.
- The driver is drunk or drowsy or disoriented.
- The driver has not compensated for the "pull" of the vehicle rounding a curve (centrifugal force).
- The driver has lost control of the vehicle.

DAYTIME RUNNING LIGHTS

Studies have shown that vehicles driving with their headlights on in the daytime are less implicated in traffic collisions. It is possible that new vehicles which are now equipped with automatic **D**aytime **R**unning **L**ights (DRL) may mask vehicles who do not use their lights during the day so the use of DRL is recommended.

Most collision reduction data comes from Finland and Sweden. This data and other has indicated that the use of DRL can reduce the incidence of being involved in a daytime collision by as much as 11%. A review of the available data by Transport Canada as well as comparative factors, has brought about the belief that DRL can be effective in reducing collisions in Canada.

EXERCISING THE FOUR "R's"

Whatever the reason, an oncoming vehicle in your lane presents a truly dangerous problem. Here is a prescription for you to learn, and practice to prevent collisions with oncoming vehicles.

READ the Road Ahead
Be aware of oncoming traffic. Stay alert by consistently applying the eye-lead-time technique. Try to anticipate what problems the oncoming driver is going to have that might cause you problems.

Ride to the RIGHT
Don't crowd that centre line. Leave plenty of room. Never drive to the left to avoid a collision with an oncoming vehicle. If you try to dodge the oncoming vehicle to the left, it may recover and run into you. This could be a fatal mistake. Always ride to the right.

REDUCE Speed
When you see a threat developing – an oncoming car that may move across the centre line for some reason, or one that already has – reduce speed. This means slow down right away. Also sound the horn or flash headlights to warn the erring driver.

Slow down. Give the other driver time to get back into the proper lane and avoid a head-on collision. Reducing speed reduces distance travelled and impact force.

RIDE Right Off the Road
If the first three steps, reading the road ahead, keeping to the right, and reducing speed, have been executed and the oncoming vehicle continues approaching in the wrong lane, there is only one out – to ride right off the road, even completely off the road's shoulder and into the ditch if necessary. Most drivers are reluctant to leave the road. They are afraid if their vehicle goes off the road, it might turn over or strike a fixed object. So, in panic, they drive into a head-on collision. don't make this mistake. Give the oncoming driver your lane – anything is better than a head-on crash.

IF YOU ARE FORCED TO DRIVE OFF THE ROAD

The main thing is – don't panic. Keep control of the emergency and ride out the situation.

HERE ARE SOME THINGS TO REMEMBER:

- Move right instead of left. If you try to dodge the oncoming vehicle to the left, it may recover and run into you.
- Drive off, don't skid off the road. Maintain control of your vehicle.
- If something must be hit and there is a choice, hit something soft instead of something hard.
- If you are given the choice, hit something that is moving in the same direction as you are instead of something which is stationary.
- Hit some fixed object instead of an oncoming vehicle.

- Finally, if there is no way out and you have to hit a fixed object or the oncoming vehicle try not to hit it head-on. Position your vehicle for a glancing blow.

Remember these points. And in an emergency, never give up. Ride it out and keep control.

RECOVERING FROM A PAVEMENT DROPOFF

Your efforts to steer back onto the road if your front wheel has dropped off the pavement can send you swerving into the path of an oncoming vehicle unless you follow these steps.

- Don't panic and don't brake.
- Slow down to a safe speed, keeping your vehicle on a straight course.
- Check for an opening in traffic and steer slowly back onto the pavement at a slight angle.
- Straighten the wheel position as soon as the front wheels contact the pavement.

COPING WITH CURVES

The best way to take a curve is to slow down before you enter it. Once in the curve you can – under good conditions – apply light power to the wheels to counteract the effect of centrifugal force.

On curves to the right, keep to the right edge of the pavement. Never allow your vehicle to drift into the other lane; centrifugal force will tend to push it out from the centre line.

On curves to the left, stay in the middle of your lane. Be alert to the other vehicle's tendency to drift into your lane, since centrifugal force pushes him toward your lane.

BLIND SPOTS

Those areas behind you that you can't see in your side and rearview mirrors. They're dangerous. Other vehicles may be travelling in those spots and you won't know it – unless you turn your head to check. Before you change lanes to pass or prepare for a turn, glance over your shoulder in the direction your vehicle will move. Make sure the way is clear.

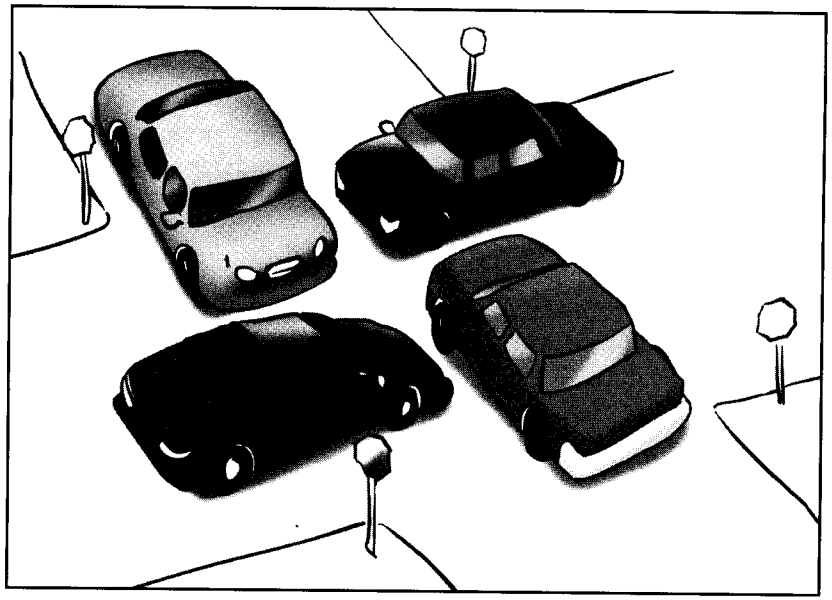
SESSION 4

AVOIDING COLLISIONS AT INTERSECTIONS

ALWAYS BE 100% PREPARED TO YIELD

Of all the driving situations you will have to deal with, the intersection is the most complicated. It will test your ability as a driver to the limit because it includes the other five driving positions all at once.

The basic, overriding rule which you should follow when approaching an intersection is Be 100% Prepared To Yield. "Yield" means prepare to slow down. Sometimes it means to stop. It always means having your foot off the accelerator and covering the brake when you see that conditions are unfavourable.



Defensive driving is not a 50:50 proposition. It's really 100:0. The defensive driver is willing to be 100% responsible for what happens to him by being 100% prepared to yield to another driver.

WHO GOES FIRST?

Forty percent of all traffic collisions happen at intersections and most intersection collisions occur because drivers fail to follow right-of-way regulations.

UNCONTROLLED INTERSECTIONS

At an uncontrolled intersection, there is no traffic sign or signal. When two vehicles approach that intersection at the same time, neither has the right-of-way. The law says that the vehicle on the left shall yield to the vehicle on the right. If a collision occurs, the driver of the vehicle on the left can be cited for failure to yield the right-of-way.

YIELD SIGN INTERSECTIONS

At a yield sign intersection, one of the intersecting roadways is given preference. When you approach such a sign at an intersection, you must give the right-of-way to any other vehicle in or closely approaching the intersection.

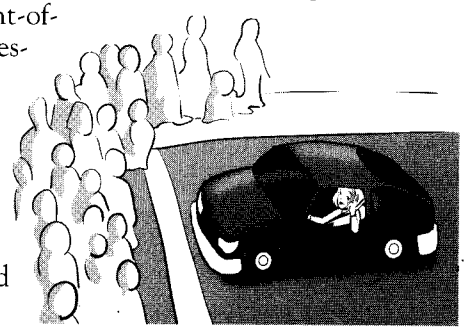
STOP SIGN INTERSECTIONS

At a stop sign intersection, vehicles approaching such signs must come to a full stop and then yield the right-of-way to any vehicles in, or closely approaching, the intersection. If two vehicles stop at signs at the same time, the vehicle on the left must yield to the vehicle on the right.

At 4-ways stops you must communicate by establishing eye-to-eye contact with other drivers and pedestrians. Be certain they know your intent and you know theirs. Be courteous and proceed with caution.

TRAFFIC CONTROLLED INTERSECTIONS

At an intersection with a traffic control device, a mechanical signal determines right-of-way. If your light is green, you may proceed – but only after yielding the right-of-way to other vehicles and pedestrians lawfully within the intersection or an adjacent crosswalk.



In Provinces allowing a right turn on a red light, you may make your turn after stopping and yielding to pedestrians and to cross-traffic vehicles.

POLICE REGULATED INTERSECTIONS

At a police regulated intersection, a police officer directs traffic, taking precedence over all control devices and signals.

BE 100% PREPARED TO YIELD

Because not all drivers understand or follow right-of-way rules, it is up to you to approach all intersections with caution. Keep your foot off the accelerator and cover the brake pedal whenever you see that conditions are unfavourable. Be ready to yield and to stop whenever necessary to prevent a collision.

Before proceeding through an intersection, look first to the left, then to the right, then back to the left. Keep scanning left to right as you drive through the intersection.

Be sure to scan what's ahead also. Correct eye-lead time is essential at intersections. A situation my be developing in the lanes ahead. Before you enter an intersection, have a total picture of what to expect.

MAKING THE RIGHT TURN

Get into the extreme right lane well in advance of the intersection.

Signal your intention to turn at least 30 metres (100 feet) before the turn and reduce your speed.

At the turn position, keep your vehicle close to the curb so that another vehicle doesn't squeeze in.

Make sure that you have the right-of-way and that there are no cross-traffic-vehicles or pedestrians.

Make your turn when it is safe to do so.

MAKING THE LEFT TURN

Get in the left lane well in advance of the intersection.

Turn on your left turn signal at least 30 metres (100 feet) before the turn, and reduce your speed.

Yield the right-of-way to cross-traffic, pedestrians and vehicles approaching from the opposite direction and close enough to present a hazard.

Keep your wheels pointed straight ahead while stopped waiting for cross-traffic.

When it is safe, make your turn into the lane nearest the centre line.

In meeting other vehicles also turning left, be sure to pass them so that they are on your right.

GOING STRAIGHT THROUGH

Be sure the right-of-way, has been yielded.

Slow down and be prepared to stop.

As you approach the intersection, have your foot off the accelerator and covering the brake pedal to give yourself that extra split second of reaction time you need to stop if a vehicle or pedestrian tries to cross in front of you.

Look first to the left, then to the right, then scan front and left. You look first to the left because traffic coming from the left is closer to you and would cross your path first.

Accelerate through the intersection when it is safe to do so.

Here is an easy formula for intersection safety:

Know your intersection laws, but don't expect all other drivers to know or obey them. Be 100% prepared to yield.

Show your intentions by your position and signal lights.

Slow down for intersections. Approach with your right foot covering the brake. Expect the unexpected.

Go with care when the way is clear and it is safe to do so.

SESSION 5

SINGLE VEHICLE COLLISIONS

THE MYSTERY CRASH

Certain types of single vehicle collisions – particularly the single vehicle, "run-off-the-road" type of collision – are often referred to as the "mystery crash". These collisions are called "mystery" crashes because their cause is undetermined. Victims of the collision often don't live to tell what happened and survivors may not admit to driver error.

"Mystery" crashes may be caused by:

- excessive speed – driving too fast for conditions
- distractions – movements or irritants that break the drivers' concentration
- fatigue – being too tired to drive
- boredom on long trips
- impaired drivers – alcohol, prescription drugs, illegal drugs

Speed

Speed is a killer when it is too fast for the condition of light, weather, road, traffic, vehicle and driver. Excessive speed is the most frequent violation noted on reports of fatal collisions today. The higher the speed the greater the chance for a collision, because there is less time to manoeuvre or to stop.

Collision severity increases dramatically at speeds around 80 km/h. The chance of death or serious injury in a traffic collision doubles for each 15 km/h speed increase over 80 km/h. So keep in mind these guidelines on speed.

- Schedule trips so you provide ample driving time.
- Be alert for speed limit signs and heed them. Lower speed as conditions warrant.
- Don't try to make up time on the road.

Distractions

Minor distractions may be a major cause of collisions and undoubtedly figure in some "mystery" crashes. They cause "near misses", minor collisions and sometimes major collisions including fatalities.

From reported cases here are some of the ways drivers become distracted with serious consequences:

- Searching for a smoldering cigarette on the seat
- Trying to fasten an occupant restraint while underway
- Reaching across the seat to close a door or rummage in the glove compartment
- Fishing for coins from pants pockets while driving up to a toll booth
- Eating fruit: juice squirted into the eye
- Trying to wind or adjust wrist watch
- Disciplining child passengers
- Trying to struggle out of a coat
- Reading a map

Defensive drivers recognize the collision potential of minor distractions. These can be avoided by:

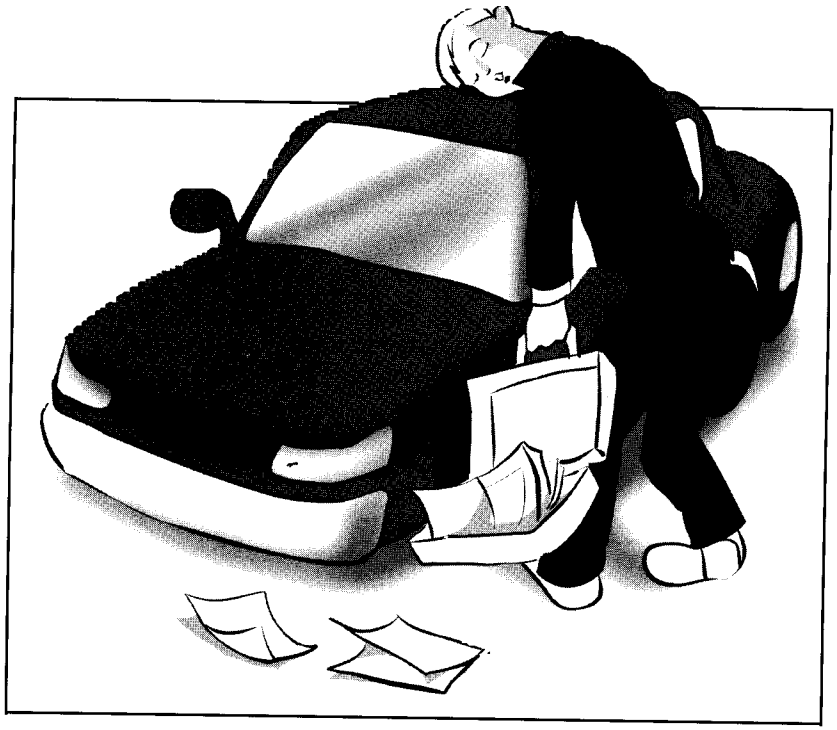
- Advance planning
- Checking seat position, safety belts, door locks and mirrors before you start
- Pulling off the road and stopping to take care of necessary tasks that may divert attention from the road

Fatigue

Excessive fatigue behind the wheel can be a killer. When fatigue and drowsiness get to the point where a driver notices them, fatigue has reached the acute stage. If you have to fight to keep your eyes open, you can bet you will lose the fight.

Defensive drivers recognize the collision potential of fatigue and avoid this potential by:

- Letting a rested person drive, or
- Stopping at the first safe place and getting rest.



ALCOHOL – OUR NUMBER ONE TRAFFIC HAZARD

A recent survey of 2,000 people from across Canada, conducted by Transport Canada, ranked impaired driving as the most serious criminal offence after murder, kidnapping, sexual assault and robbery. The respondents also expressed the greatest degree of concern for impaired driving from among the list of social and health problems.

Yet, half of these people, of all ages, said they had driven after drinking some alcohol during the previous month. Fourteen percent of the drinkers in the sample said they had driven when they thought they may have been legally impaired.

This gives you some idea of the magnitude of the problem. It's no wonder people throughout the country are becoming increasingly concerned and angered over the threat presented by impaired drivers on the road. They are enraged at the disregard shown by these people for the law.

Estimates are that roughly 2,000 people are killed in collisions involving alcohol in Canada each year. That's 50 percent of all driver deaths. Last year alcohol was a factor in more than 40,000 collisions resulting in injuries. These tragic statistics have prompted many people to demand that tough action be taken against impaired drivers.

On December 4th, 1985, the Federal Government amended the Criminal Code, introducing stiffer penalties for impaired driving. Here are the highlights:

The Law

It is illegal to operate any type of motor vehicle, boat or aircraft while under the influence of alcohol or drugs. If someone is impaired, they should not be driving – period.

The new law calls for increased fines and long jail terms.

Anyone found guilty of impaired driving will have a criminal record. Think about it. A judge certainly will if that person faces criminal charges in the future.

The Crime –

It is a crime to drive while impaired by alcohol or drugs. It doesn't take a lot of alcohol to be impaired. You don't have to feel drunk and you don't have to be at or over the blood alcohol content level to be charged with impaired driving.

It is a crime to drive with too much alcohol in your blood. The legal limit is 80 mg. per 100 ml. of blood. Only a couple of drinks can make you impaired, depending on body weight, time and other factors.

The law applies to all types of motorized vehicles – cars, trucks, motorcycles, snowmobiles, all-terrain vehicles and heavy equipment. It covers boats – sailboats, motorboats and other pleasure and commercial vessels. For aircraft, the law not only covers the pilot but anyone assisting in its operation.

The Proof –

If a police officer suspects that a driver is impaired, the driver may be required to pull over.

The officer may ask for breath samples at the roadside to test the amount of alcohol in the blood or the driver may be taken to the police station to be tested.

If the person cannot physically give a breath sample, the police are allowed to ask the person to let a doctor take blood samples. They may also be taken by a nurse or hospital technician under a doctor's authority. If the person is injured and cannot be asked, the police, with the permission of a judge, can ask a doctor to take a blood sample. A person submitting to blood testing has the right to have one of the samples tested independently.

To refuse to give a breath or blood sample is a crime, unless the judge at the trial believes the person has a reasonable excuse. If found guilty, the convicted person faces the same penalties as for impaired driving.

Anyone charged with committing any of these crimes will have to go to court for trial.

The Penalties –

The convicted driver can be fined or sent to jail and prohibited from driving.

On First Conviction

a fine of $300 or more and prohibition from driving for three months or longer.

On Second Conviction

14 days in jail or longer and a prohibition from driving for 6 months or longer.

On Third Conviction

90 days in jail or longer and a prohibition from driving for one year or longer.

These are the minimum penalties. A judge may sentence the person to pay a higher fee or to serve a longer jail term – up to five years. The judge may also prohibit him or her from driving for up to three years.

In addition, the provincial or territorial government may take away the person's driver's licence for the same or a longer period.

The Criminal Code also enables the ordering of alcohol rehabilitation treatment in some cases.

Penalties for leaving the scene of an accident include up to two years in prison and licence suspension for up to three years.

If impaired drivers kill or injure people the penalties are:

Impaired Driving Causing Bodily Harm

up to 10 years in prison and up to a 10-year prohibition from driving.

Impaired Driving Causing Death

up to 14 years in prison and up to a 10-year prohibition from driving.

Criminal Negligence Causing Bodily Harm

up to 10 years in prison and up to a 10-year prohibition from driving.

Manslaughter and Criminal Negligence Causing Death

up to life in prison and up to lifetime prohibition from driving.

All of these penalties apply equally to impaired boating and flying.

ALCOHOL – PHYSIOLOGICAL EFFECTS

Most drivers are dangerously ignorant of physiological effects of alcohol.

Here Are the Facts:

- alcohol is the same in beer as it is in wine and whisky. People do not like to accept the fact – but a 341 ml. (12 oz.) bottle of beer contains the same amount of alcohol as a 43 ml. (1.5 oz.) drink of 80 proof whisky or one 85 ml. glass of table wine.
- alcohol is rapidly absorbed into the bloodstream and carried through the body. It quickly affects brain functions in these ways:
- impairs judgement
- creates a false sense of confidence
- reduces field of vision
- lowers hearing acuity
- reduces concentration
- impairs balance, coordination, and motor skills.
- Only time can eliminate alcohol from the blood. It's a slow process that's not speeded up by exercise, cold showers, or coffee. The body rids itself of alcohol through the liver at a rate of approximately one drink per hour. Nothing speeds up the process.
- The more alcohol a person consumes, the greater the impairment of his or her physical activities and mental faculties. This impairment can be measured by breath and blood tests which determine the percentage of alcohol in the blood.

Driver impairment is reached before there are 80 milligrams of alcohol in 100 millilitres of blood (the method of expressing the concentration may also be shown as 80 mg% and/or .08 – point zero eight).

DETERMINING BLOOD ALCOHOL CONTENT (BAC)

The more alcohol, the higher the BAC. In all provinces, the legal intoxication level is at least 80 mg. per 100 ml. of blood. Blood alcohol concentration in the body is related to body weight, emotional state, physical condition, amount of alcohol consumed and the time span of drinking.

You can be legally intoxicated and still not feel intoxicated. If you consume alcohol regularly over a period of months or years, your body "handles" alcohol differently from a person who has less experience with alcohol. It's a process known as tolerance. Don't be fooled by it: a blood or breath test won't be.

WHAT CAN YOU DO TO PREVENT ALCOHOL-RELATED COLLISIONS?

The first defence against becoming an impaired driver is: If you drive, don't drink.

We know that about one-third of the driving population does not drink alcohol at all, or they drink so little that they are almost abstainers. There are also temporary abstainers. For example, airlines do not allow their pilots to drink alcoholic beverages in any quantity during the 24 hours before flight time.

All drinkers can become temporary abstainers. This is the best way to avoid driving while impaired.

The second defence against becoming an impaired driver is:

If you drink, don't drive.

This requires that the person preparing to consume alcoholic beverages plans ahead. Take a taxi or public transportation. Designate a driver who will refrain from drinking alcohol to assure the safe transportation of others.

IF YOU ARE HOSTING A PARTY WHERE ALCOHOL IS BEING SERVED

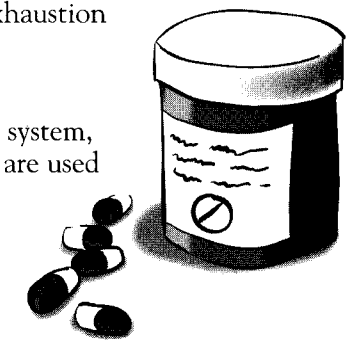
1. Serve snack foods early and often. This tends to slow down the assimilation of alcohol.
2. Plan some activity such as dancing or games. This usually tends to cut down on the amount of alcohol consumed.
3. Always respect the wishes of any guest who says "No, thanks" to the offer of a final drink or who says "I'll just have coffee". Never press alcoholic beverages on a guest.
4. When mixing drinks, include lots of mix and use standard measures to ensure that you do not "over-pour" drinks. Make non-alcoholic beverages available for those guests who prefer not to consume alcohol.
5. Close the bar early and have non-alcoholic beverages available for the final "one for the road".
6. Arrange transportation for alcohol-impaired guests, or encourage them to spend the night.

OVER THE COUNTER/PRESCRIPTION DRUGS

Amphetamines and Other Stimulants

These drugs stimulate the central nervous system to keep a person awake and alert. Some drivers, particularly long-haul truckers, may take stimulants to prolong the time they can remain behind the wheel without rest. Amphetamines are also found in decongestants, cold remedies and diet aids.

Stimulants can give a driver a false sense of alertness and self-confidence, which may encourage willingness to take risks. They will mask fatigue, preventing a driver from being aware of its affects. When the drug wears off, dizziness or exhaustion often occur.



Sedatives and Tranquillizers

These drugs depress the central nervous system, slowing heartbeat and breathing. They are used in the treatment of tension, nervous disorders, emotional problems, alcoholism, high blood pressure, epilepsy, and insomnia. They may also be found in muscle relaxants.

Sedatives and tranquillizers can cause drowsiness, and can severely limit a driver's ability to concentrate. Lack of coordination, dizziness, blurred vision, and confusion are potential side effects. In combination with alcohol, barbiturates can cause severe depression, dangerously slow heart rate, and even kill.

Narcotics

Narcotics are depressants, and are used to relieve pain and induce sleep. Continued use may lead to addiction. Many non-prescription cough and cold remedies sold in Canada contain a common narcotic, codeine.

Drowsiness, visual impairment, confusion of thought, lack of concentration, and delayed response are all side effects of narcotics.

Antihistamines

Antihistamines are used to treat allergies, colds, flu and skin conditions. Many common preparations contain an antihistamine. If in doubt as to the contents or possible side effects of a drug, ask your doctor or pharmacist for advice.

Many antihistamines cause drowsiness, blurred vision, lack of coordination and fatigue.

Antibiotics

Antibiotics are widely used to treat many kinds of infections, from skin rashes to sore throats.

Potential side effects include dizziness, drowsiness, ringing in the ears, headache, nausea and vomiting.

ILLEGAL DRUGS

LSD and mescaline are strong hallucinogens which can produce drastic mind-altering effects. Marijuana is a mild hallucinogen which can act either as a stimulant or a depressant depending on the strength of the dose, the user's mood, and his/her experiences with the drug. Cocaine acts as a stimulant, producing a feeling of euphoria in small doses and violent stimulation and hallucination in greater quantities.

Not only is it illegal to possess and use such drugs, it is also against the law to drive while under their influence. They will have various effects depending on whether they are narcotics, stimulants, or depressants. An additional danger is that a user has no way of knowing the strength of an illegal drug.

DRINKS, DRUGS AND DRIVING: A LOSING COMBINATION

Some drugs taken alone have an impairing effect on driving ability. Other drugs have no detrimental effect when used alone and in recommended doses. There is, however, a considerable danger to driving ability when certain drugs are mixed with alcohol.

For Instance, Did You Know That:

- a mixture of a tranquillizer and alcohol is one of the most hazardous combinations known for impairing driving ability.
- marijuana markedly impairs perceptual functions. Alcohol decreases this ability even further.
- sedatives increase the hazards of alcohol, even if the alcohol is consumed as long as 10 hours after the drug has been taken.
- sedatives taken with alcohol can cause serious mood changes.
- stimulants taken alone create a subjective feeling of increased efficiency. Because they reduce the ability to judge fatigue, an unexpected attack of sleepiness can occur as the stimulant wears off. The use of stimulants to overcome fatigue during long drives and night-time driving can be extremely dangerous.
- antidepressants, during the initial stages of use, cause drowsiness and can, therefore, impair driving ability. During the first three to four weeks of treatment with an antidepressant you should refrain from driving.
- stimulants such as caffeine, and depressants such as alcohol, do not cancel each other out. If you take a stimulant to counteract the effects of alcohol, the result will not be sobriety. While it is unclear what the effects will be, the combination will not improve your reflexes.
- most antihistamines combined with even small doses of alcohol can result in an inability to drive a vehicle.

While only some drugs are dangerous alone or when combined with alcohol, the effects are commonly unpredictable even for the same person at different times. For a few drugs – barbiturates for example – the combination with alcohol can be fatal.

When in doubt, don't mix alcohol with any drug. Always ask your doctor or pharmacist for advice on whether you should be driving after consuming a prescribed drug and ask if the drug will be hazardous to your driving if you drink even small amounts of alcohol.

SESSION 6

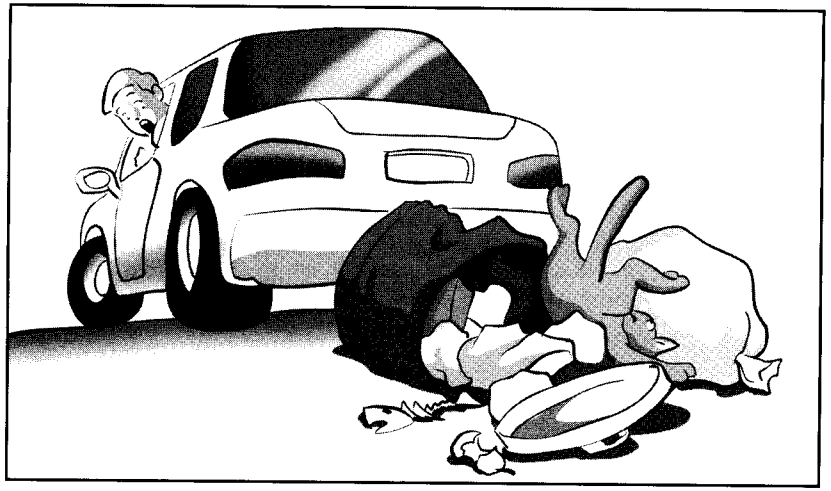
SHARING THE ROAD WITH OTHER ROAD USERS

BACKING COLLISIONS

A particularly troublesome type of single-vehicle collision. These collisions are a source of damage, injury and occasionally a fatality.

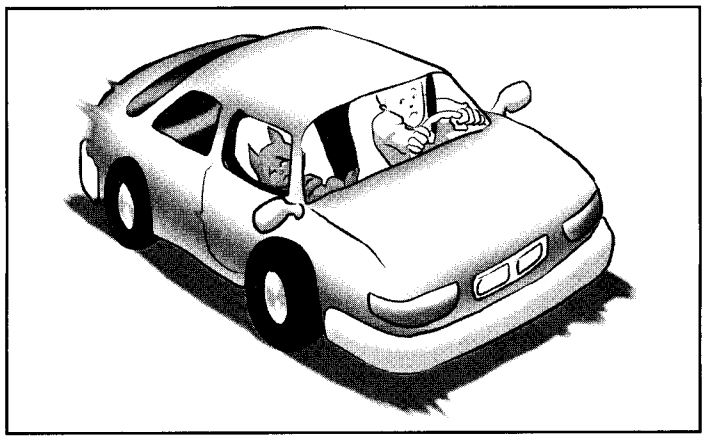
Poor backing technique is fairly common, because in no other phase of driving does the driver leave more factors to pure chance. The defensive driver can improve backing technique and avoid backing collisions by observing the following rules:

- Avoid backing wherever possible by planning the route to eliminate the need for it. Defensive drivers do not back out of driveways or alleys when it can be avoided.
- As a habit, they back in and drive out. This allows them to examine the area to be backed into as the vehicle approaches it. Defensive drivers also select parking spaces that can be left without backing wherever it is possible.



When backing is unavoidable follow these steps:

- Look back – when you must back be certain to look behind while you are reversing. At the same time remember that you must also check to the front and both sides. Use eye-lead time in reverse.
- Back slowly – never at a speed faster than a brisk walk.
- Limit the distance – back only as far as absolutely necessary to reposition the vehicle so a forward gear may be used.

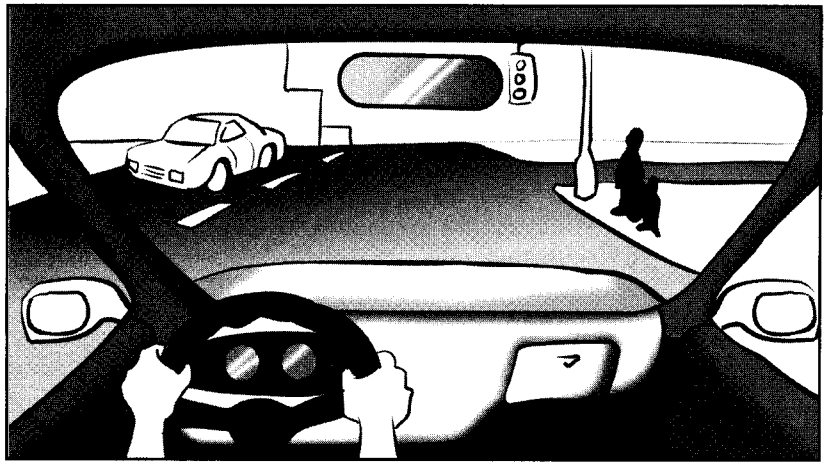


VEHICLE/PEDESTRIAN COLLISIONS

The hazards associated with pedestrians in traffic are many and varied. A driver must learn to recognize these hazards and avoid them wherever possible. Some of the more common are:

- Buses and Street Cars. Use extreme care when passing stopped or slowing buses or street cars as pedestrians may be running from any direction to board them or may dart across the street in front of a transit vehicle after alighting from it.
- Parked cars. Be particularly careful when passing parked cars in areas where children may be playing. Adults can be seen over the hood of a parked car, a child cannot. However, their legs and feet can be seen through the underside of parked vehicles as they are approached.
- Children. Children are completely unpredictable. Remember this and drive accordingly when in their vicinity. A friendly tap on the horn will get their attention. If you see a ball bounce on the road you can be sure a child is close behind.
- Senior Citizens. Elderly people may have heir physical abilities impaired by age. Give them the respect they deserve. Reduce your speed and be prepared to stop.
- Impaired Person. A large number of fatal pedestrian collisions occur when the driver strikes an impaired person. Be especially cautious if you suspect a pedestrian of being impaired.
- Lighting. Darkness offers other visibility problems whenever pedestrians are concerned. Always encourage family and friends to wear bright retro-reflective material at night. Be aware that pedestrian collisions increase during darkness.
- Pedestrian Crosswalks. Right-of-way must be given to pedestrians in the crosswalk and they must be allowed free and uninterrupted passage. It is unlawful to pass another vehicle within 30 m (100 ft.) of a pedestrian crosswalk.

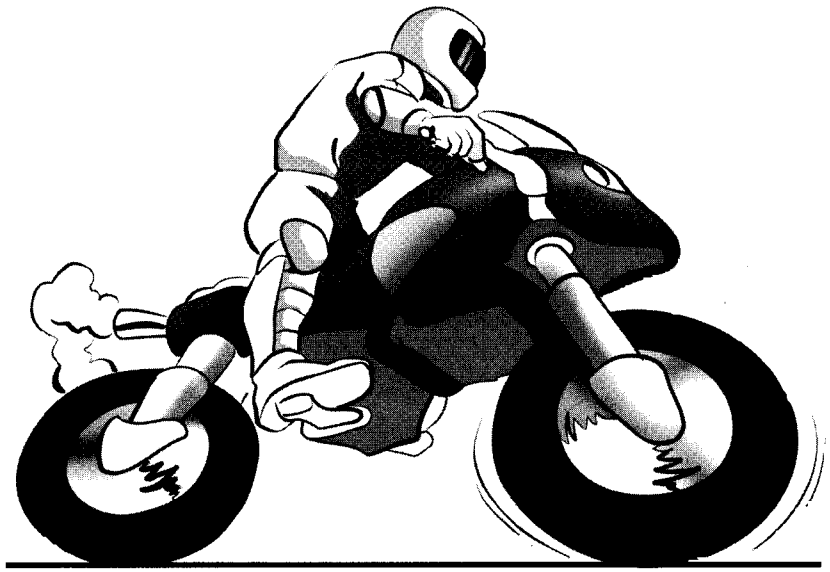
Remember, always drive in the manner in which you would like others to drive if you were walking.



VEHICLE/MOTORCYCLE COLLISIONS

Motorcycles are more numerous on the nation's streets and highways with each passing year. With them comes an added responsibility on the part of the motorist. Many of the collisions which occur between the vehicle driver and the motorcyclist are the fault of the motorist.

Many motorists think motorcycles require less space on the road than do other vehicles, just because the motorcycle is smaller. That is not true. A motorcyclist is entitled to a full lane, just as is any four-wheeled vehicle. Do not try to crowd in any way, or try to force to the edge of the road.



Respect the motorcyclist as a fellow driver.

Most motorcycle-vehicle collisions occur because the motorist simply doesn't see the cyclist. Often a motorcycle is hidden in the vehicle blind spot. Outside rearview mirrors are not enough to rely upon. When changing lanes check the blindspot(s) by taking a quick glance over your shoulder. Be alert for the presence of a cyclist on the outer edge of your traffic lane, especially on turns. A motorcycle often is screened by another car.

Consider the motorcyclist as being less protected than you are. Be especially cautious when passing a motorcyclist; the buffeting created by your windstream may cause it to wobble. The inexperienced motorcyclist should be given a wide berth. You can recognize the inexperienced motorcyclist if the motorcycle jerks when making gear changes, or if the driver is hesitant in making decisions in traffic. Always leave plenty of room and be prepared to stop.

Because a motorcycle is smaller, it may appear to be farther away than it actually is, and it may seem to be moving slower. Always allow more following distance by adding an extra second to your following distance time-interval. Remember, this following distance must be further increased as conditions demand.

Hazards for the motorcyclist can entrap the car driver, too. A cyclist ahead can lose control of the machine when sand, gravel, wet leaves or water are on the pavement. Always be aware of conditions that may cause a spill. Leave plenty of room, and slow down.

VEHICLE/TRAIN COLLISIONS

You would think, after all the years we have had railroads and with all the money that is spent on signs, flashers and gates, we would have no railroad crossing crashes. But there are still many persons killed in such crashes every year.

There are about 31,000 rail grade crossings in Canada. Of this total about 25,000 are provided with nothing but warning signs to protect the motorist. What can be done to prevent this type of collision?

- First, approach all crossings with the vehicle under control. Start slowing down as soon as the advance warning signs come into sight.

- Be sure to look both ways and listen for approaching trains. Do not look and listen too late. Remember that at crossings without signals, the driver alone has to make the decision.
- Flashing light signals – sometimes in combination with gates – are used at many railway crossings. Always stop when the lights begin to flash because a train is coming. Do not proceed until you can do so safely and the warning signals have ceased to operate.
- Never rely on mechanical devices. If there is more than one track, make sure all tracks are clear before crossing.
- Watch out for the second train. When the last car of the train passes do not start up until you are sure no train is coming on another track.
- Expect a train on any track at any time. Don't let familiarity breed contempt. Anytime is train time.
- Never race a train. You may never have another chance if you lose.
- Never shift gears on the crossing.
- Watch for vehicles that must stop at crossings. Be prepared to stop when you are following buses or trucks.
- Train speed is difficult to estimate. When in doubt, stop.

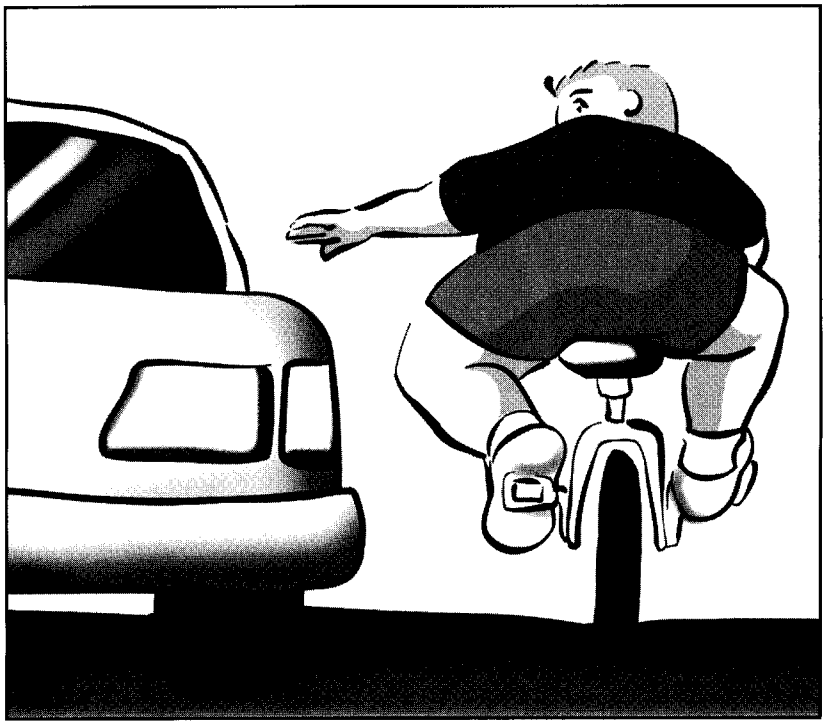
VEHICLE/BICYCLE COLLISIONS

Collisions with bicycles represent another type of fatal traffic collision.

Bicyclists must be protected. Bicycles are classified as vehicles, and cyclists are expected to obey the same traffic rules and regulations as do vehicle operators, such as keeping to the right, signalling turns and obeying all traffic signs and signals.

But many cyclists are children, and they may not know or obey the rules. So they must be protected by slowing down, tapping the horn and giving them plenty of room when over-taking or passing them.

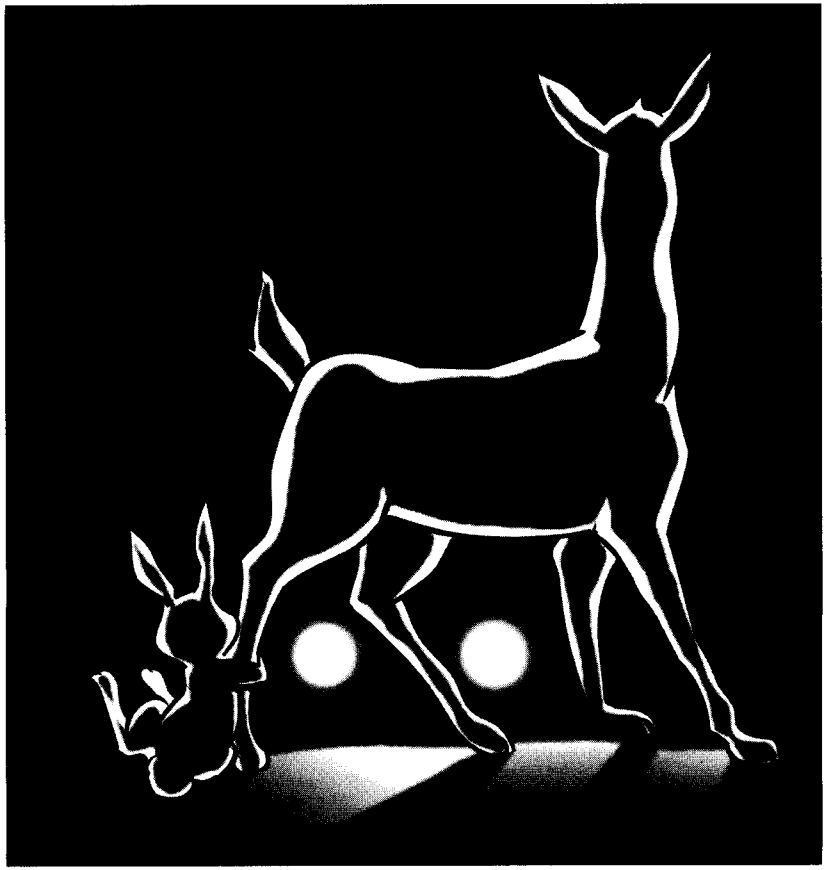
Watch for cyclists slipping between the car and the curb when making a right turn, and be especially watchful for cyclists riding at night, since many cyclists will have inefficient lights and reflectors, or none at all.



VEHICLE/ANIMAL COLLISIONS

Every year a number of people die as a result of collisions with animals. Depending on the animal that is struck by the vehicle, damage to the vehicle and its occupants can be serious.

Animals that stand high on their legs (moose, deer, etc.) can roll onto the hood and into the windshield of a vehicle after they have been hit. Be alert for animals, especially in wildlife areas and on open highways in farm or range country.



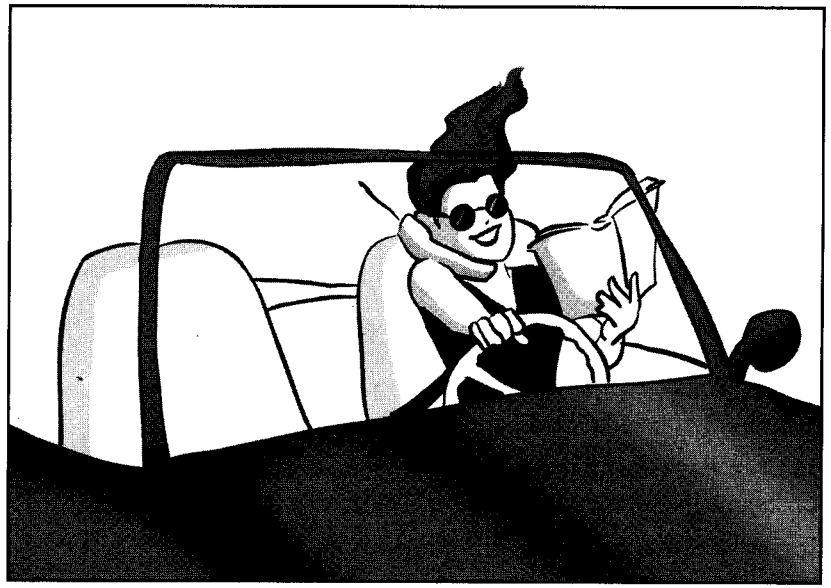
The Three Basic Steps to Follow to Avoid A Collision With An Animal Are:

1. When animals are observed ahead, slow down until safely past them.
2. After the first animal has been passed safely, search for a second animal closely behind it.
3. Animals are very unpredictable, expect a surprise.

CELLULAR TELEPHONES

Some safe driving features for using your cellular telephone are:

- Purchase a "Hands Free" model so that you can keep both hands on the steering wheel.
- Don't dial while driving. Time your dialling to coincide with stops you would have to make anyway (ie. parking lot, arrival at your destination, etc.), or pull off the road altogether.
- Learn to operate your telephone without looking at it.
- Never take notes while using your cellular telephone or get so wrapped up in a conversation that you drift into the other lane. Remember, driving has priority over anything else when using your telephone.
- Should you spot a collision or a driver in need of assistance, use your cellular telephone to call the police or ambulance.



OCCUPANT RESTRAINTS – SENSE AND NONSENSE

Occupant restraints save lives. However, in spite of the fact that the value of safety belts in saving lives and preventing injuries has been documented by massive evidence, many drivers still refuse to wear them, or wear them only part of the time. The reasons given for not wearing occupant restraints all have one thing in common – they are wrong.

Here Are the Facts:

- 8 out of every 10 crashes happen at speeds less than 60 km/h. People who are not wearing their occupant restraints have been fatally injured at speeds as slow as 20 km/h.
- Being thrown into a steering assembly accounts for 30% of fatal injuries of people involved in collisions.
- 40% of deaths are caused by striking the windshield, windshield frame, or instrument panel.
- Your chances of being fatally injured are 25 times greater if thrown from your vehicle. Estimates reveal that 4 out of 5 people who died when thrown form their vehicle would have lived, had they remained inside it.
- 1 out of 5 injuries occurs because unrestrained people inside the vehicle slam into each other.
- 1 out of every 200 injury-producing crashes involves fire or submersion in water. Wearing your occupant restraint will help you to survive the collision so that you have a better chance to remain conscious and be able to leave your vehicle.

Most of these deaths and injuries could have been prevented if the occupants wore their occupant restraints.

It can be lethal to hold a child on your lap.

A 14 kg. child being dropped for a third storey window has the same effect as a 50 km/h crash.

Infants and children less than 4 years of age should ride secured in a Transport Canada approved crash-tested safety seat.

Pregnant women should also wear their occupant restraints. The lap portion should ride low under the stomach.

There is one more fact:

In a collision you have a choice. You can hit the windshield, the steering column – or your occupant restraint. The choice is yours only if you buckle up ahead of time. You can change the statistics by wearing an occupant restraint, and insisting passengers also properly fasten themselves into the vehicle.

SESSIONS 1 & 2

COURSE NOTES AND CASE STUDIES

1. Definition of defensive driving:

2. Definition of a preventable collision:

3. The six conditions present in every driving situation are:

   1. 4.

   2. 5.

   3. 6.

4. While all conditions are important and deserve our attention, the most important condition is

   _____ condition.

5. The Standard Accident Prevention Formula is:

   1. _____ the hazard.

   2. _____ the _____.

   3. _____ in _____.

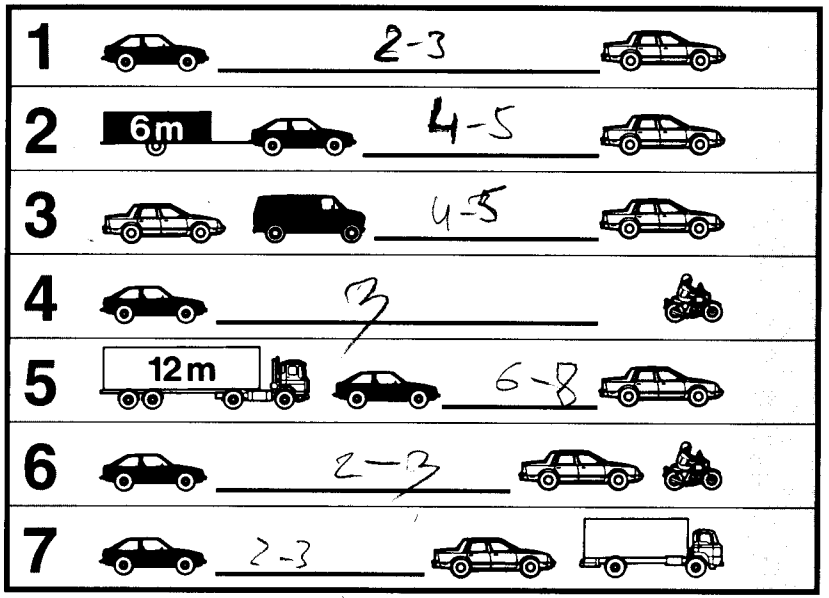
6. A review of the six conditions prior to beginning to drive is called a _____.

7. Eye-lead-time is a technique which requires you to keep your eyes 15 sec ahead

8. The Time-Interval Formula requires you to allow 1 seconds of following distance for each 3 metres of vehicle length.

9. The following distance time-interval must be adjusted as conditions demand.

10. The vehicles in the seven drawings below are all travelling 50 km/h (30 mph). You are driving the black vehicle. Decide the following distance time-interval (in seconds) which you would allow in each situation. Write your answer on the line before the black vehicle.



YOU BE THE TRAFFIC JUDGE IN THE CASES BELOW

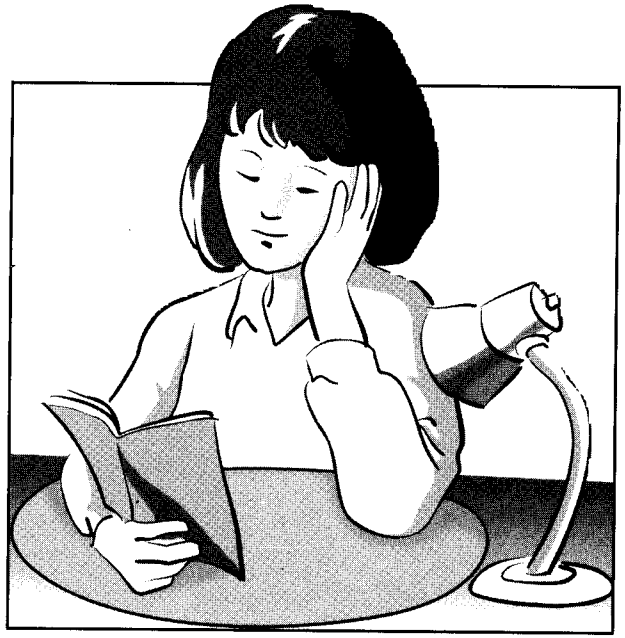
"It was raining hard, and I was following a bus and two cars. We were approaching a town. The bus stopped without pulling off the pavement. The two other cars in front stopped too. I applied my brakes but began to skid. I tried to pull to the left but the front wheels skidded and I ran into the rear of the car ahead."

		True	False
1.	The collision was non-preventable because weather conditions made it impossible to stop.		✓
2.	The collision was non-preventable because the vehicle in front was closer to the situation and should have signalled that he was going to stop.		✓
3.	The collision was preventable because your vehicle should have been equipped with chains.		✓
4.	The collision was non-preventable because it was caused by the bus stopping on the pavement.		✓
5.	The collision was preventable because rear-end collisions are always preventable by the driver behind.	✓	

"I was travelling in a long line of cars and trucks. The flow of traffic was about 80 km/h. The road was dry and the weather clear.

Suddenly a car darted into the stream of traffic from a side road ahead. I was about 10 m (30 ft.) behind the car ahead, and I barely managed to stop when he stopped, but the driver behind rammed into me."

		True	False
1.	This collision could have been prevented.	✓	
2.	The driver who tried to dart into the traffic from the side road was at fault, I couldn't have prevented this collision.		✓
3.	The driver behind me was at fault.		
4.	I could have prevented this collision.		



SESSIONS 3 & 4

COURSE NOTES AND CASE STUDIES

1. When you are passing or being passed the following kinds of collisions are possible:

-

-

-

2. The steps you should follow in passing are:
   1. **STAY BACK**
      a)
      b)
      c)
      d)
   2. **MOVE LEFT**
      a)
      b)
      c)
   3. **MOVE RIGHT**
      a)
      b)

3. The **THREE** questions you must always ask before passing another vehicle are:

   1.

   2.

   3.

4. Passing is unsafe in the following situations:

5. What are the reasons why an oncoming vehicle crosses the centre line into your path?

6. What is the proper way to round a curve?

7. List the four R's you should follow to prevent a collision with an oncoming vehicle.

   1.

   2.

   3.

   4.

8. Split-Second Decisions
   a. Move _____ instead of _____ .
   b. _____ off the road instead of skidding.
   c. Hit something _____ instead of _____ .
   d. Hit something moving instead of _____ .
   e. Hit something fixed instead of _____ .
   f. _____ instead of head-on.

9. The overriding rule at intersections is be _____ prepared to yield.

10. In making the right turn:
    Get in the _____ lane well in advance of the corner.
    Signal intentions at least _____ metres before the turn.
    Slow down _____ .
    Keep as close as possible to the _____ .

11. In making the left turn:
    Get in the _____ well in advance of the corner.
    Turn on left signal at least _____ metres in advance of the turn.
    Slow down _____ .
    _____ to cross traffic, pedestrians and vehicles.
    Keep your wheels pointed _____ while stopped waiting for cross-traffic.

12. When going through any intersection you should look first to the _____ and then to the _____ and then _____ to the _____ again.

13. List the four-point plan for intersection safety.
    1.
    2.
    3.
    4.

BE YOUR OWN TRAFFIC JUDGE

"I was stopped at an intersection regulated by traffic lights. I was in the left lane and the light had turned green. The vehicle alongside started through the intersection and I started, too. He slammed on his brakes but I failed to see a car coming through the intersection from the right. I had a right-angle collision with this vehicle in the middle of the intersection, resulting in extensive damage."

	True	False
1. The collision was non-preventable because the vehicle on the intersecting street was going through against the light.	_____	_____
2. The collision was non-preventable because the vehicle in the right lane was partially at fault because the driver was in a better position to see the vehicle coming from the right, and should not have made a move until it was across the intersection.	_____	_____
3. The collision was preventable because you should have checked to see if all traffic had cleared.	_____	_____

4. The collision was non-preventable because if you can't trust signal lights, there is no hope for any driver who really wants to have a good safety record. ____ ____

5. The collision was preventable because the green light is no guarantee of the right-of-way. ____ ____

"I was following a long line of cars that had stacked up behind a slow moving farm vehicle. I had an important appointment in the next town, so I pulled out to pass and had almost passed when an approaching car came in sight from over a hill. It must have been going about 130 km/h (80 mph). I tried to cut into the right lane, but the driver of the car I was passing would not let me in. I pulled in anyway forcing him off the road and damaging his left front fender. The door on the right side of my vehicle was scraped in."

	True	False
1. The collision was non-preventable because there was nothing else you could have done in the emergency.	____	____
2. The emergency was created entirely by the oncoming car exceeding the speed limit.	____	____
3. In situations of this kind, the car being passed is supposed to slow down, opening up a gap for the passing car to return safely to the right lane.	____	____
4. The collision was preventable because you did not allow enough room to make the pass.	____	____
5. The collision was caused by the slow moving farm vehicle which had no right to be on the highway.	____	____

SESSIONS 5 & 6

COURSE NOTES

1. The run-off-the-road type of collision is called the "Mystery Crash" because:

2. What are the causes of the "Mystery Crash"?

3. Drugs affecting driving are:
   1.
   2.
   3.
   4.
   5.

4. The most dangerous drug to mix with driving is _____.

5. The three factors which affect Blood-Alcohol-Content are:
   1.
   2.
   3.

6. The two defences against becoming an impaired driver are:

   1.

   2.

7. Three points of good backing technique are:

   1.

   2.

   3.

8. The most frequent factors in pedestrian collisions are:

9. Motorcycles require _____ as another vehicle on the road.

10. The choice is yours – you can hit the _____ , you can hit the _____ , or you can hit your _____ _____ .

SUPPLEMENTARY INFORMATION

DEALING WITH EMERGENCY SITUATIONS

Your Brakes Fail

You step on the brake – and the pedal slaps uselessly on the floor. It's a terrifying experience!

If there is any resistance, pump the pedal. You may be able to work up enough pressure to help some.

If there is no pressure and the way ahead is clear, coast in drive gear and use the parking brake. If you need to slow faster, shift into lower forward gear and let engine compression help.

On a hill or mountain grade, you're in trouble. Look for something to sideswipe – roadside brush, a snowbank, a guardrail, even parked cars.

Use your horn or lights to warn other drivers and pedestrians that you are experiencing a problem.

You Go Into A Skid

Abrupt turns, sudden lane changes or hard braking can throw you into a dangerous skid, especially on wet or icy roads.

If your vehicle starts to slide, take your foot off the gas. Never hit the brakes during a skid correction.

Your first instinct may be to turn hard away from the direction of the skid. Don't! That will really put you into a crash.

Instead, turn your wheels in the same direction the rear of the car is skidding. But be careful about it – don't oversteer. You'll be able to "feel" when the car regains rolling traction. Then straighten the wheels.

Threshold braking is the fastest way to stop with the least chance of skidding. It is done by squeezing the brake and getting maximum stopping without locking the wheels. It is difficult to do every time, particularly in a panic situation. The next best solution is to pump the brakes.

Your Accelerator Sticks

You let up on the gas pedal and nothing happens. Keep cool – this is one of the easiest of driving emergencies to handle.

If you're on the open highway and there's plenty of room ahead, try to pull the pedal up with the toe of your shoe or have a front seat passenger do it. Don't reach down yourself and take your attention from the road. If there isn't time, simply turn off the ignition and brake to a stop.

CAUTION: With some transmissions the steering wheel "LOCK" position must be avoided. Turn the key only to the "OFF" position.

You Have A Blowout

Keep a firm and steady grip on the steering wheel – don't oversteer to correct the swerve or pull. If a front tire goes, there will be a strong pull toward the side with the blowout. A rear blowout tends to cause weaving of the back of the vehicle.

Above all, don't slam on the brakes! Brake smoothly – but easy does it. Sudden braking may throw you into a spin or out of control.

Get onto the shoulder and find a place level enough to change the tire safely. Day or night, set out flares or other warning devices and turn on the flashers.

Your Headlights Go Out

There's only one thing to do if your headlights go out and you're suddenly plunged into darkness – hold a straight steering course and brake as hard as you can without throwing the vehicle into a skid. Then ease onto the shoulder as far from a traffic lane as you can get. The idea is to pull your speed down quickly before a slight steering error takes you off the road.

Once stopped, set out flares or use a flashlight to warn oncoming traffic. Use the four-way flashers if they are operable.

If everything is dead – radio, blower, interior lights, etc. – the problem probably is the battery cables. Check the terminals at both ends.

You Must Stop on A Highway

On an expressway with paved shoulders, signal and pull off at near traffic speed, then slow down. Where the shoulder is unpaved, signal a right turn and slow down to a safe speed before turning off.

Leave low-beam headlights on in dusk, darkness or bad weather, turn on interior lights and four-way flashers if you have them.

If you must stop close to a traffic lane, on a curve, over a hill or in any risky location, get everyone out of the car and well away from traffic. By all means, don't obscure taillights at night by standing or working behind the car.

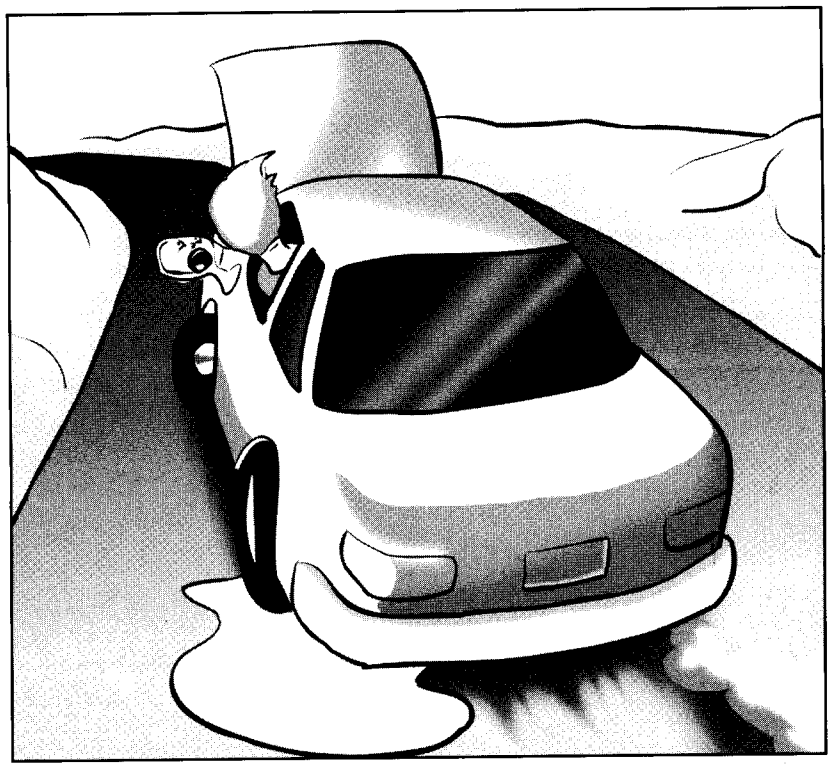
Day or night, place a flare or other warning device just behind the car and another at least 100 metres (300 feet) back (that's about 120 paces).

Raise the hood and tie a white handkerchief to the antenna or left door handle as a signal if help is needed.

Your Hood Flies up

Brake smoothly and ease onto the shoulder. You'll have to depend on the view from your left window for steering reference. On some cars you may be able to peek through the gap under the hinge edge of the hood.

Make it a habit to check whether the attendant securely latched the hood after a service station stop.



CRITICAL AGE GROUPS AND THE TRAFFIC COLLISION PROBLEM

The Older Driver

When the number of kilometres driven is taken into account, drivers 55 and over have a poorer collision record than drivers in their middle years. Aging drivers comprise 22 per cent of the licensed drivers and their number is growing.

People age at different rates and in various ways – physically, psychologically and sociologically. The rate of aging is not constant even within the same person. Nevertheless, certain general areas of lessening abilities among aging drivers must be considered and attended to.

Despite the compensatory caution and slower driving speeds that typify the aging driver's habits, these drivers still are responsible for more collisions than the numbers on the road warrant. On the average, people reduce the amount of driving they do as they grow older. However, collisions involving aging drivers are more often fatal than those involving young and middle-aged drivers.

Some Recommendations

Following are some pointers that could reduce the number and severity of collisions among older drivers.

1. Consult a physician for an annual checkup, and follow any advice. Take corrective measures, such as eyeglass prescription changes, hearing aids, etc.
2. Ask your physician about any drugs that might impair your driving.
3. Never 'push' yourself while driving. Take more frequent rest periods while on extended trips. At day's end, make a habit of retiring earlier.
4. When driving on well-travelled highways, take the slower lane; don't try to compete in traffic.
5. Plan your routes so you will not be in dense or high-speed traffic.

6. Try to avoid rush-hour and night-time driving.

7. If possible, stay off the road when conditions are difficult. In winter the weather is unpredictable.

8. Participate in physical activity. Regular and reasonable exercise sharpens reactions.

9. Honestly recognize your driving mistakes and near-misses. If the time comes when you feel uneasy at the wheel and unsure of yourself, relinquish your licence for your safety and that of others.

The Youthful Driver

Young drivers, aged 15 to 24, are disproportionately involved in motor vehicle collisions. Though they comprise about 22 per cent of the driving public, they represent almost 35 per cent of the drivers involved in fatal collisions. Those figures point to the young driver as a hazard both to himself and to other highway users.

Various studies have attempted to discover why the young comprise an especially collision-prone group. Some researchers have investigated personality variables and have noted relationships between these variables and driving behaviour. However, personality traits explained only a small amount of difference in individual driving behaviour.

Most investigations of the young driver emphasized less real-world driving experience and more exposure to hazardous driving conditions than the elder counterpart. In other words, the young driver is more likely to drive at night, on weekends and on wet and slippery roads than older drivers. But even when such exposures are considered, the 15 to 24-year-olds still emerge with the worst record. Clearly, the combination of inexperience, high exposure and immaturity adds up to the "dangerous young driver".

An important task is making the young driver less of a risk to himself and other highway users. This can be done by imparting knowledge and developing correct attitudes and driving skills. High school driver education plays a prominent role in the national approach to the problem.

Of utmost importance to the young driver's ability to handle a vehicle safely is accomplishing, through formal training, the following objectives:

1. knowing; the rules of the road.

2. knowing; how the automobile functions.

3. being able to manoeuvre the vehicle safely in traffic, including emergency situations.

4. being able; to drive competently in various light, road, traffic, vehicle and weather conditions.

5. remembering that driving is a privilege carrying responsibilities and not a right granted to everyone.

6. learning to do everything within reason to prevent a collision, and

7. driving defensively.

The Child Passenger

Unlike the adult, the child has a pelvis with broad gentle contours. The prominent crests that provide an anchor point and contact area for the lap belt do not develop until approximately age 10. These factors make it important that special consideration be given to selecting crash protection for the infant and child.

9 kg (20 lbs.) or less	Use rear-facing restraints that are anchored by the adult lap belt.
9 kg to 18 kg (20-40 lbs.)	Use properly installed child restraints such as: 1. 5-point safety harness seats 2. seats with protection shields
over 18 kg (over 40 lbs.)	Use a regular lap belt. However, care must be taken to prevent the lap belt form moving up off the pelvic bones onto the soft abdomen.
Over 24 kg (over 60 lbs.)	Use a properly fitted shoulder and lap belt.

Pointers on Child Restraints

1. A restraint designed especially for the child passenger should be fastened to the car either by the adult occupant restraint or by an anchor of the restraint itself to the car structure. Seats that hook over the seat back offer little restraining ability and may give way in a crash.

2. A seat should give cushioned protection from both front and rear crashes.

3. A child's upper body should be restrained by belts at least 1½ inches wide, or by an impact pad.

4. Adequate padding meeting federal standards should line all areas a child's head might encounter upon impact. Check for any sharp or pointed hardware.

5. The safest position for a child to ride in an automobile is in the centre rear seat.

6. Children under five years of age should not be permitted to use the adult occupant restraint. Lap belts put too much pressure on too small an area of the child's body, and they can slip out from under them. Shoulder belts are dangerous too when they cross the child's neck or face.

7. Children over age of five years or over 18 kg may use the adult restraint system, again preferably the one in the centre rear seat.

8. Restraints must be used every time. Short trips are no exception.

PLANNING A TRIP? MAKE A TRIP PLAN

Itinerary

Write provincial capitals for official touring information, or request a complete trip plan from your auto club.

From these sources work out your route to cover all the places you want to visit.

How far to do in one day? That depends on the driver, whether there is more than one driver, the kind of roads and how often stops are planned. On older roads, 480 km (300 miles) a day may be a safe maximum (that's six hours on the road at 80 km/h (50 mph) average). On today's superhighways considerably more daily travel can be safely achieved. But where traffic is heavy, roads are winding or sight distances are poor – or where scenery is an important part of the day's travel – hold the distance down for greatest safety and enjoyment.

Checklist

A week or so before leaving, start making a list of things to take along. Add other items as they come to mind. Use the list as a checkoff when you pack and load the car – it's the only way to avoid forgetting something essential.

Safety Check Your Car

Before you leave, get complete maintenance service – with emphasis on SAFETY.

A stall on today's high-speed roads can be a frightening – and dangerous – experience. So, if you're not happy with your car's start, idle or road performance, tell a mechanic. A tune-up before setting out may save risk or towing expense later.

Tell the mechanic you're going to take a trip. Ask him to make a complete safety check covering:

Tires (including spare), Steering System, Brakes, Hoses and Belts, Exhaust System, Windshield Wipers and Washers, All Lights, Front End Alignment, Fluid Levels (water, oil, master brake cylinder, power steering reservoir, transmission, differential, battery).

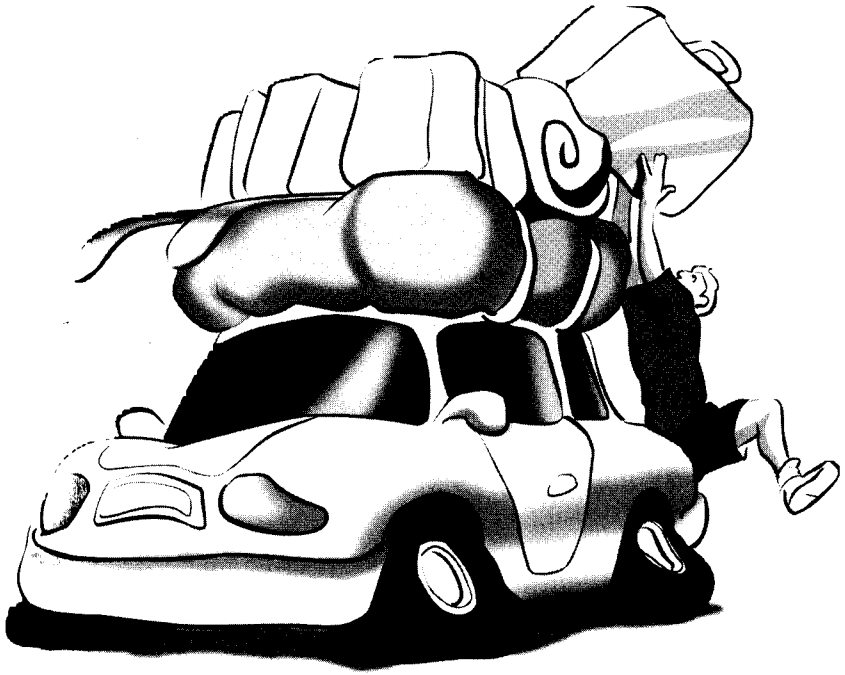
Packing Pointers

A heavy load changes the handling characteristics of a vehicle, so don't expect the performance you are accustomed to in normal driving. Acceleration will be more sluggish. Stopping distances will be greater. And you'll find increased sway on curves. More room for passing and stopping will be needed.

Load the vehicle so that you don't block the rear vision or the rear-view mirror. A heavy trunk load can dangerously affect steering and headlight aim. This is especially hazardous in rain when the shift of weight balance from the font wheels can cause hydroplaning and loss of steering control. A top carrier or a small trailer may distribute a heavy load better.

Keep hard, pointed or heavy objects off the rear shelf. In a minor collision or even a sudden stop, they can become lethal missiles.

Proper tire inflation and adequate tire size are all-important considerations when carrying extra cargo. You may need additional air pressure – or larger-size tires may be necessary for safety. Consult your owner's manual.



Emergency Equipment

Highway troubles are rare for the modern motorist, but they do happen. Here's what the wise driver keeps in the vehicle for possible on-the-road emergencies.

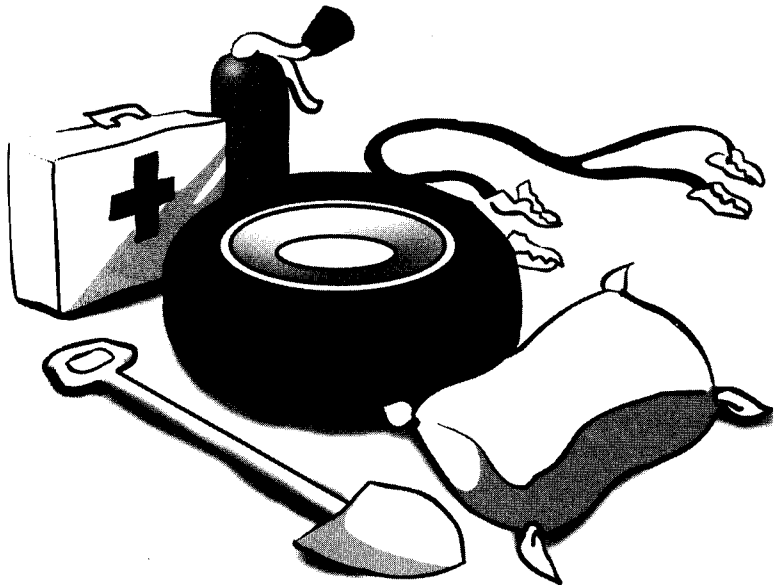
Take Along Extra Equipment

Survival in any hostile environment depends upon being equipped to handle ALL demands that the situation may impose. Therefore, all vehicles should carry the following basic equipment for winter operation:

- properly inflated spare tire
- wheel wrench
- tripod type jack (single leg jacks are unstable when ground conditions are poor)
- lightweight shovel
- reinforced tire chains
- tire wedges (to prevent rolling)
- a SECOND SET of car keys located OUTSIDE the passenger and trunk compartments. Car keys can be easily lost in deep snow...SO BE PREPARED.
- a bag of sand, wire traction mat or some other suitable abrasive substance
- first aid kit
- pliers
- rubber mallet
- windshield scraper
- snow brush
- flashlight
- tow chain
- flares
- supply of gasoline anti-freeze
- a set of battery jumper cables
- large box of facial tissues

For Out-of-town Trips the above equipment should be supplemented with:

- blankets or sleeping bags
- lined winter boots and hat
- a supply of rags
- twelve wide candles
- a fire extinguisher
- a blizzard or emergency ration kit



Blizzard Or Emergency Ration Kit Includes:

- several small cans of Sterno (canned heat) USE WITH CARE! ENSURE ADEQUATE VENTILATION
- several packs of safety matches WOODEN MATCHES ARE BETTER
- a pair of woolen mitts & 2 pairs of woolen socks
- an aluminum mug
- a small aluminum pot

- knife, fork & spoon
- one or more one-gallon cans with plastic covers, such as empty three-pound coffee cans (for toilet facilities if required).
- sources of high-calorie non-perishable food energy such as nuts, candy, gum drops, biscuits, crackers, cookies, dried soups, dried beef, sweet bakers chocolate, honey, gum, sugar, powdered milk, tea bags, instant coffee.

Drinking water may be obtained by melting snow but DO NOT EAT SNOW. This uses up body heat and lowers your body temperature, it also dehydrates your body resulting in a net water LOSS!

The kit may be contained in a five-gallon oil can with a clamp on lid or some other AIR TIGHT receptacle. Keep the emergency kit INSIDE the car. The trunk may be frozen shut or jammed by a collision when you need it.

PEOPLE EMERGENCIES - HOW TO HANDLE THEM

You Need a Doctor

Observe speed limits but hurry to the nearest town. Flash your headlights at any patrol car you see along the way, then pull over and park. The officer will escort you. Without such help look for a policeman as you drive into town, or stop at the first drugstore and ask directions to the nearest hospital, clinic or doctor.

At the hospital, look for the **EMERGENCY** sign and drive directly to that entrance.

You Are Too Sleepy to Go On.

1. Stop at the first safe place. Open two or more windows slightly, lock all doors.
2. Rest. Sleep, if possible for 30 minutes or more, then drink coffee if available.
3. When you resume driving, keep some windows open, play the radio, chew gum, sing, keep your eyes moving.
4. Stop for a night's rest at the first opportunity.

Caution: If fatigue is unusual for you, suspect an engine exhaust leak. Have the exhaust system checked before continuing your trip.

IF YOU HAVE A COLLISION

It happens to thousands of people every year. Here's what to do if it happens to you.

Stop At Once near the scene but away from traffic.

Help the Injured but don't move anyone unless necessary. Give first aid only if you are qualified.

Protect the Scene by clearing the road if possible, putting out warning signals and stationing someone to warn traffic.

Notify Police if there are injuries or property damage. THEN –

Get name and address of the other driver and the owner and licence number of the other vehicle.

Get the names and seating positions of the other occupants.

Write down the names and addresses of the witnesses.

Make a diagram of the physical details of the collision. If possible, take pictures.

See a doctor – you might be injured and not know it.

Report to your insurance company immediately.

File an official collision report.

Did You Know That

Even before the arrival of police, it's permissible to move vehicles if they are a traffic hazard. This is contingent upon there being no death or injuries involved and no suspicion of alcohol involvement.

You are required give your name and address and show your driver licence and vehicle registration upon request by police. There is no responsibility to say more. The law recognizes that you may be in a condition of shock and not competent to make a statement.

You don't have to sign anything for anybody if you are unsure.

IF YOU ARE FIRST AT THE SCENE OF A COLLISION

Here's what to do

Park off the highway 15 to 30 metres (50 to 100 feet) from the nearest vehicle.

Protect the scene with flares, lanterns or flags and get others to warn traffic in both directions.

Then help the injured and account for occupants of all vehicles. Call for medical aid if needed. Administer first aid only if qualified. Do not move the injured unless they are endangered by traffic, fire or bleeding.

Call the police authority – your call will be referred to the proper jurisdiction.

IN THE EVENT OF A COLLISION...

The Collision Information You Should Record

Time: _____ am OR pm

Date: _____

Place:

Street: _____

Intersection: _____

Your Speed: _____

Posted Speed Limit: _____

How / Why did the collision happen?

_____

_____

_____

Damage to your vehicle?

_____

_____

Damage to other vehicle (if applicable)?

_____

_____

Other Driver Information:

Name: _____

Address: _____

Phone Number:

Home - ( ) _____

Work - ( ) _____

Vehicle Type, Colour and Year:

_____

Vehicle Licence Number: _____

Number of Vehicle Occupants: _____

Driver License Number: _____

Insurance Agent Name: _____

Insurance Policy Number: _____

Any Injuries to Vehicle Occupants:

Your Vehicle:

_____

_____

Other Vehicle:

_____

_____

Witnesses:

#1

Name: _____

Address: _____

Phone Number:

Home - (____) _____

Work - (____) _____

#2

Name: _____

Address: _____

Phone Number:

Home - (____) _____

Work - (____) _____

TEN TIPS FROM PROFESSIONAL DRIVERS

Truck and bus drivers are among the most skilful on the road – some of them have driven more than 1_ million km (a million miles) without collision. Here are some of their ideas for driving safely:

1. Adjust the seat so you're 10 to 20 cm (4 to 8 inches) from the lower rim of the steering wheel but able to press the pedals firmly. Sit up straight.

2. Fasten your lap and shoulder belts snugly. In addition to its safety factor, a snug belt will help keep you sitting erect, with less back fatigue on long runs.

3. See that rear-view mirrors are correctly set for you.

4. Use your eyes – keep them moving ahead, to the mirrors, to the sides – and they'll give advance warning of situations that quickly become emergencies.

5. Always leave an "out" – space for possible evasive action – in adjoining lanes, front, rear and shoulder.

6. Watch the vehicle in front and the brake lights of the car ahead of it for extra time in stopping.

7. Learn to anticipate potential collisions. An expert driver "expects" the car following the bus to suddenly swerve around it.

8. Use the horn whenever you're not sure the other fellow sees you. The idea that a good driver doesn't have to use the horn is a dangerous fallacy.

9. At night, reduce about 15 km/h (10 mph) below your usual daytime speed.

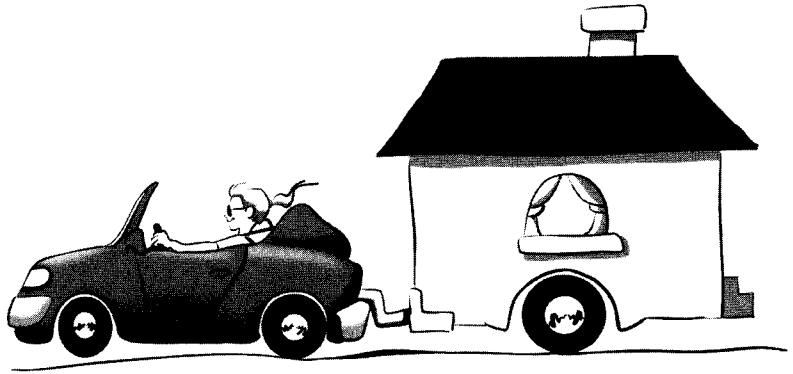
10. Realize, as pro drivers do, that you have passed the peak of your efficiency after five or six hours at the wheel. Allow for it, as the pros do, by slowing down and taking it easy.

TOWING A TRAILER

Towing a trailer, boat or house trailer requires special skill and added caution on the road. The extra overall length must be taken into consideration. Some safe trailering pointers:

Equipment

A strong hitch is essential. Make sure it is installed so that when your trailer is attached and tightened, the tongue of your trailer tracks on a horizontal plane with the road. Be sure your hitch is welded or bolted to the frame of your car and has the correct ball coupling. Connect safety chains. Check the brake connections to the trailer, and see that the trailer lights are in working order.



Starting

Always start slowly. Check traffic. Signal that your intend to move into traffic lanes.

Turning

When turning corners, stay in the centre of your lane, close to but not on the centreline. On right turns, look in your right mirror, signal and slow down. Move forward until the car's front wheels are well ahead of the intersection curb, then turn right. On left turns, observe traffic, signal and proceed slowly well into the intersection. Swing wide to allow for the trailer to track with adequate clearance.

Passing

Remember that your vehicle and trailer combination needs more room and more time to pass than a vehicle alone. On two-way roads, make sure you have at least half a mile of unobstructed road ahead. Check your mirrors on both sides. Be well ahead of the vehicle to be passed before moving back into your lane. When being passed, help other drivers to pass you where it is necessary . Try not to hold up a line of traffic.

Stopping

Stop gradually. A sudden stop may jackknife the trailer. When preparing to stop, get into the slower lane.

Backing

Always back slowly, with small corrections of the steering wheel. To back a trailer right, place hand at bottom of steering wheel and push it to the right; to back left, push the steering wheel to the left. Practice backing in a safe open area, such as an empty parking lot.

Following Distance

Increase the time-interval following distance. Add more seconds if conditions are adverse.

FIRST AID IN TRAFFIC COLLISIONS

At some time or other you may come upon a traffic collision. Many of them are serious and the persons involved may need help quickly. Even if not trained in first aid, it is important to remember that there are things which you can do.

1 - If you are the first one on the scene, protect yourself and others from existing hazards and do not create new ones.

Park on the shoulder, away from the collision.

Warn oncoming traffic.

Do not allow smoking near the crash.

2 If possible, send for help, particularly to notify police and call for an ambulance, if needed. In doubtful situations, assume an ambulance is needed.

3 If a first-aider, nurse or doctor arrives on the scene, turn the responsibility over and offer your help.

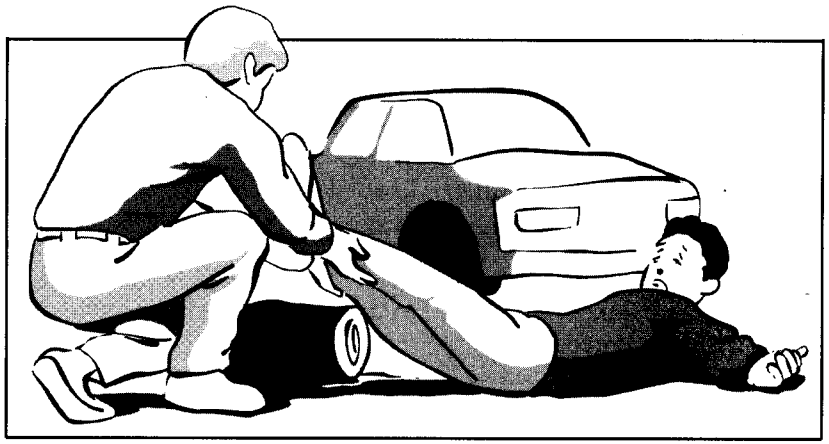
4. If you are the only one who can help, here are some things to do. As others arrive on the scene, ask them to assist you. Quickly examine the injured and help each in order of priority: stopped breathing, severe bleeding, and unconsciousness. Try to help the injured where they lie.

   If a person has stopped breathing, attempt artificial respiration at once.

   To stop bleeding, a compress made from any clean cloth should be pressed directly over the wound. If one is not immediately available use your bare hand. Elevate the limb and when the bleeding has subsided, find a cloth and bandage over the dressing snugly, but not too tight. Articles of clothing can be used as bandages if necessary.

   Unconscious casualties may suffocate if left on their back. When injuries permit, turn them on their side.

5. Do not move the injured unless there are life-threatening conditions. Unnecessary movement of a person with an injured neck or spine can complicate the injury, or even cause death.
6. If removal is necessary, the injured should be moved in the direction of the long axis of the body by the arms or shoulders, or by the feet. Move them carefully and as gently s possible. Use any available blanket, coat or similar item as a skid if time permits.



7. Make the injured as comfortable as possible. The best position usually is flat on the back. Do what you can to prevent shock. Keep them warm. If the ground is cold, put a blanket or heavy garment down. Elevate the legs 8 to 10 inches. In case of bleeding from the lower part of the face and jaw, turn the injured on their side. Do not give fluids, stimulants or alcohol.

8. The transportation of a seriously injured person to the hospital should be under- taken with care and only when medical aid cannot come to the scene. The victim must be prepared and handled properly, usually a task for more than one person.

   A general rule. If you are first on the scene, is to do what you can for the injured, but await the arrival of authorities and ambulance to proceed with any situation you are unsure of. The victims should only be moved if they are in danger of further injury from an outside force (ie. vehicle fire, gasoline leak, traffic, etc.).

9. Cooperate fully with authorities, giving them any information, names and addresses you may have obtained, as well as your knowledge of the circumstances of the collision.

10. If there are fatalities, do not move or permit the bodies to be moved until the authorities arrive and take over.

Coming upon a crash scene can be a frightening experience. The Canada Safety Council recommends that you invest 4 hours of your time and take FIRST AID FOR DRIVERS, a course specifically designed by St. John Ambulance with the motorist in mind. This course will give you the confidence and the skills needed to know what to do at the scene of a collision. For more information contact your local St. John Ambulance office or National Headquarters at 312 Laurier Avenue East, Box 388, Terminal "A", Ottawa, Ontario, K1N 8V4.

WHAT SHOULD A FIRST AID KIT CONTAIN?

QTY	ITEM	PURPOSE
1	Package of assorted self-adhesive dressings	covering small cuts and abrasions
12	Gauze dressings, 10 cm x 10 cm individually packed sterile	cleansing and covering minor wounds
4	Pressure dressings	controlling severe bleeding
1	Burn dressing	covering major burns
1	Adhesive tape, 2.5 cm roll	securing gauze dressings
2	Roller bandages, 7.5 cm cling-type	securing gauze dressings
6	Triangular bandages	slings, securing dressings and immobilizing fractures
10	Cleansing wipes	cleaning wound areas
6	Safety pins, large	securing bandages and slings
1	Scissors, heavy-duty, serrated	cutting dressings and seatbelts
1	Rescue blanket, weatherproof foil or plastic	covering the casualty
	Plastic bags	for various uses
	Small change	for pay telephones
	First aid manual	Emergency First Aid Safety Oriented, St. John Ambulance
	Containers, waterproof	storage of first aid items.

Additional Suggestions

Suggested contents may be supplemented or some items may be substituted by articles found around the home, e.g. clean white towels, pads of facial tissues and sanitary napkins make good improvised dressings; opened garbage bags may be used as a weatherproof blanket.

The contents of a first aid kit should be checked periodically and replenished after each use.

Remember that a first aid kit is only as effective as your ability to use it; every driver should take a St. John Ambulance First Aid Course.

Courtesy St. John Ambulance

TAKING CARE OF YOUR VEHICLE

The modern automobile is a complicated device made up of some 15,000 parts, integrated into several systems – braking, suspension, steering, power, fuel, drive train, exhaust, cooling and electrical.

A vehicle in which "all systems are go" is essential to safety because failure of the vehicle's ability to move, turn, stop or be seen can involve you and others in a collision.

The average driver needs more knowledge about the vehicle and the importance of each system – how it functions, early symptoms of malfunction, and what corrective action to take. A wise driver can save many a headache on the road, stay out of collisions, save money and get better service from a garage.

Here are some things the defensive driver should know:

1. Read the owner's manual. Re-read it occasionally.
2. Read the automotive news sections of your newspaper and magazine articles about vehicle care.
3. All of the major manufacturers have consumer information and customer service departments whose function is to make a driver more knowledgeable about a vehicle and its needs. Write to them for information.
4. Form the habit of performing more of the routine inspection and maintenance tasks. This will add to your interest and knowledge and should result in having a better maintained and safer vehicle.
5. Take a vehicle-care course at a local high school evening class.

Vehicle Condition

A vehicle that is in top running condition is safer, more responsive and gives a more comfortable ride. Various parts of the vehicle contribute to your defensive driving technique as follows:

Steering and Suspension System

Several parts and operating systems are involved in your ability to steer the vehicle, and they are all connected or interrelated. If one or more of the parts are bent, damaged, too loose or too tight, it can affect the entire steering system.

Shock Absorbers

These are designed to dampen or "absorb" the shock of a bump and keep the wheels on the road. They also help keep the vehicle level on turns and uneven road surfaces. Test your shocks by pushing down on a corner of the vehicle body and noting "snubbing" action in both directions. There should be only one slight rebound.

Steering Wheel

If play in the steering wheel exceeds 5 cm (2 in.) it calls for adjustment or repair to loose or worn parts. Have the system inspected by a trained mechanic.

Wheel Alignment

This is the angular setting of the front wheels in relation to the steering and suspension parts. Correct front wheel alignment will ensure a straight forward course, and it will greatly lessen tire wear.

Braking System

The braking system of your vehicle is designed for one purpose: to stop it when you want it stopped. It is probably the single most important system in a vehicle.

There are two kinds of brakes – drum and disc. In the drum brake, shoes are pushed against the inner surface or drums and the resulting friction stops the vehicle; in the disc brake, a disc replaces the drum and caliper pads squeeze the disc when the brakes are applied. Many vehicles are equipped with power brakes which do not stop the vehicle any faster than mechanical brakes, but make braking easier for the driver.

Some tips on brake care:

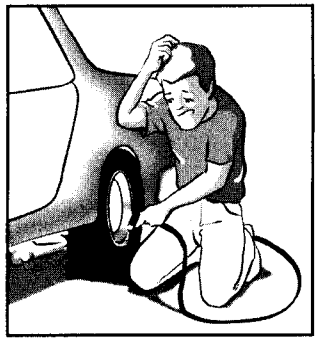
1. Unless you must make an emergency stop, don't jam on the brakes. Anticipate stopping and brake lightly but steadily. Hard application causes wear.
2. When driving down steep hills, shift to a lower gear. Do not ride the brakes.
3. Check the level of brake fluid each time oil is checked. Have brake linings inspected at least once a year.

TIRES AND TIRE CARE

Tires act as the primary bump absorber between the vehicle wheels and the road. They provide driving traction and steering control. They have to grip the road when brakes are applied so the vehicle will stop.

Here are some special tips on tire care:

1. Correct tire inflation provides better traction and braking, easier steering, better cornering, extra insurance against blowouts and longer tread life. Check air pressure at least once a month and before setting out on long trips, but only when the tires are cool. Cold pressure means the vehicle has not been driven for at least three hours or it has been driven slowly less than one km (6/10 of a mile) after standing for three hours or more.
2. During winter months check inflation more frequently, because readings change by approximately one pound for every 5°C (10°F) variation in temperature.
3. Keep an accurate tire gauge in the glove compartment; hose gauges at service stations can be very inaccurate.
4. Check front tires occasionally to detect uneven wear that may denote poor wheel alignment. Good treads provide the multiple road gripping edges vital to traction. They channel off water between the tread and the road in wet weather driving, thus reducing the danger of hydroplaning.



VEHICLE OPTIONS AND NEW TECHNOLOGIES

Air Bags & Supplemental Restraint Systems

Since 1990, vehicles imported and manufactured in Canada have been offering air bags as options on new vehicles sold to the

motoring public. Today, it seems this option has become more of a standard feature on most 1995 and after model vehicles.

Air bags are also known as Supplemental Restraint Systems (SRS). You will know if your vehicle is equipped with them because the words **Air Bag** or the initials **SRS** will appear on the steering wheel hub (for a driver side air bag) and on the dash in front of the passenger (for the passenger side air bag).

Air bags are meant to work in concert with the vehicle's primary restraint system, namely the lap and shoulder belt (seat belt). Without the use of the primary restraint system, the deploying air bag would only give a vehicle occupant something else to bounce off of in the event of a crash. When used in concert with the seat belt, the deploying air bag saves the driver / passenger from impacting with the steering wheel, windshield or dashboard during the worst of the crash's forward momentum.

The supplemental restraint system does not contain harmful chemicals which will burn the occupants of any motor vehicle. The active ingredients which are present in the vehicle compartment when an air bag deploys include sodium azide and baking soda - both fairly harmless substances, but which can cause irritation if they come in contact with a persons eyes, nose or other sensitive areas. If this happens, rinse thoroughly as soon as possible.

Air bags deploy at an incredible rate of speed (80 to 110 km/ph). An air bag deploys and deflates in less than 1.5 seconds. In fact, in a collision situation, many people do not know the air bag has gone off until they see the deflated bag hanging from the steering wheel hub or the dash board in front of the passenger. Deployment is accompanied by a very loud bang - most people, however, do not hear it since they are involved in a loud crash situation.

Air bags originated in the United States of America where they were unable to achieve the sort of seat belt wearing rate that we have achieved in Canada (currently over 92% nationally). They set the air bag threshold at a very low speed (ie. 8 - 15 m/ph) so that vehicle operators in the US would not be injured in low speed crashes because they were not wearing their seatbelts. This threshold, however, is not appropriate for the Canadian market. We have a very high seat belt wearing rate and by and large, our vehicle operators and passengers are not in danger of injury if involved in low speed crashes. The air bags however continue to deploy at very low speeds in Canada - causing expensive insurance claims to replace them.

Overall, air bags could be one of the better new technologies, but the way they are set currently their thresholds), they are an expensive piece of new technology for the average Canadian citizen.

For more information, contact a vehicle manufacturer or Transport Canada.

ANTI-LOCK BRAKES (ABS)

Anti-lock brakes are an option on many of the new vehicles sold in Canada and the US today. There are two primary advantages to the anti-lock braking system. First, they operate in such a manner as to allow a vehicle to have maximum braking power, but will stop the braking power before it reaches the point of lock-up. Secondly and possible the best feature of the anti-lock system, the driver retains full steering power while having maximum braking power.

When discussing anti-lock brake systems with course participants, do not try and get technical with regard to the mechanics of the system unless it is an area where you are very knowledgable. Give them some basic information and then refer them to the vehicle manufacturers or a dealer in the area who can provide them with more information.

Unfortunately, many vehicle operators who buy a new vehicle or rent a vehicle which is equipped with anti-lock brakes are not fully aware of what the brakes do or how they work. Many consumers are under the impression that having ABS on a vehicle will allow them to stop in a much shorter distance in all situations and weather conditions - **this is not necessarily the case**. Many universities and organizations are still studying the differences in stopping distances between ABS equipped vehicles and vehicles with disc or drum brakes. The jury is still out with regard to under what conditions (weather and proper usage) an ABS vehicle will stop in a shorter or longer distance than a vehicle with a regular braking system. Since there are still many questions regarding this new technology, the following are some characteristics and ways to best use the various anti-lock brake systems.

* Depending upon the system you vehicle has, the brake pedal may pulsate when you are applying steady, heavy pressure in a braking situation.

* In a hard braking situation, the vehicle will feel like is braking, then not braking, then braking again in a sequence.* In a hard braking situation, the ABS will determines when brakes are nearing lock-up and release the braking power to ensure brakes do not lock-up - this is normal!
* In an emergency braking situation, the best way to use ABS is to apply your foot hard on the brake pedal and do not let up on it - keep it there and keep the pressure steady. **Do not pump anti-lock brakes!**
* Ensure that if you must replace any tires, that they are the size which is recommended in the Owner's Manual. Placement of over or under-sized tires on a vehicle which is equipped with anti-lock brakes may disable the system.

BRAKING

A vehicle's braking system and the condition it is in can be a very important factor if you are ever faced with having to use your brakes to avoid a collision. The condition of you brakes will determine whether you have the braking power to do what you have to in an emergency situation.

Obviously your ability to use your braking system is also going to be a determining factor. If you are in an emergency braking situation and you have ABS, you are going to want to apply the most pressure to the brake pedal and keep it there - the system will do the rest of the work for you. At the same time, do not freeze - **Remember**, ABS allows you to retain steering capabilities - use them!

If you have standard disc or drum brakes, the most effective way to brake is called threshold braking. This is the practice of applying your brakes as much as you possibly can to the point just before the wheels would lock up. This is a difficult way to brake and many people are unable to do it. If you are in a hard braking situation with disc or drum brakes and you do lock up the wheels, release the brakes and quickly re-apply them. This is where the practice of pumping the brakes came from - pumping the brakes also allowed you short intervals when you could try and steer a bit before re-applying the brakes.

The Old Adage

If you use drugs, don't drive, is still valid. But here are some additional rules that may save a life.

1. If ill, see a doctor.
2. If the doctor prescribes drugs, ask about driving while on the medication. Double check with the pharmacist.
3. If you drink, even occasionally, ask the doctor about the combined effect of alcohol and any medicine prescribed.

The following list contains some of the various types of drugs, what they are usually taken for, and their effect relevant to driving.

TYPE OF DRUGS AND EXAMPLES	REASON FOR ADMINISTERING	POTENTIAL SIDE EFFECTS OF DRIVING
Analgesics (Indocin,	Arthritis and Rheumatism	Drowsiness, inability to concentrate, ringing in ears
Antihistamines (chlorphenamine, actifedo, asperin cold pills)	Allergies Common Cold	Drowsiness, confusion, reduced reaction time, blurred vision, dizziness
Oral hyperglycemics (orinase, tolbutamide)	Diabetes	Drowsiness, inability to concentrate
Antihyperactives (hydrochlorathiazide, reserpine)	Hypertension	Drowsiness, dizziness, blurred vision
Stimulants (fastin, Phentermine)	Weight control	False feeling of alertness, over-excitability
Antibiotics	Infections	Dizziness, drowsiness inability to concentrate
EMOTIONAL STATES		
Sedatives (valium, diazepam)	Anxiety	Dizziness, staggering, blurred vision
Stimulants (ritalin, methylphenidate)	Depression, Fatigue	Over-excitability, false sense of alertness, dizziness